

No. 6364

Office Supreme Court U.S.
FED

No. 6332.

OCT 1 1965

JOHN F. DAVIS, CLERK

United States Court of Appeals
For the First Circuit

NEW ENGLAND ELECTRIC
SYSTEM ET AL.,

~~PETITIONER~~



SECURITIES AND
EXCHANGE COMMISSION,

~~RESPONDENT~~

RECORD APPENDIX
TO
BRIEF FOR PETITIONERS

VOLUME I
Initial Commission Proceedings,
Pleadings and Testimony
(Pages 1 - 556)

INDEX

VOLUME I

| | Page |
|--|------|
| Relevant Docket Entries Below | 1 |
| Notice and Order for Hearing | 2 |
| Joint Answer of All Respondents* | 22 |
| Schedule A—Correction of Notice and Order | 25 |
| Respondents' Motion to Dismiss | 26 |
| Findings and Opinion | 27 |
| Order Dismissing Proceeding in Respect of Certain Issues | 39 |
| Order Reconvening Hearing | 40 |
| Notice of Appearance and Answer of The Common- wealth of Massachusetts, Department of Public Utilities | 41 |
| Stenographic Transcript of Hearing | |
| Testimony of: | |
| William Webster, | 56 |
| Robert S. Quig, | 94 |
| Harold L. Dalbeck, | 136 |
| Leigh FitzGerald, | 274 |
| R. F. Krause, | 304 |
| Harry Hanson, | 333 |
| Cross | 381 |
| Elmer H. Lothes, | 392 |
| C. W. Pearson | 457 |
| Robert Ross Cahal, Jr., | 497 |
| Thomas J. Johnson, Jr., | 521 |
| Cross | 557 |
| Robert S. Quig (Recalled), | 563 |
| Cross | 576 |

* References to "Respondents" are to the Petitioners herein who were Respondents before the Commission.

| | Page |
|--|------|
| Francis X. Lang, | 580 |
| Direct | 580 |
| Cross | 594 |
| James F. Simes, | 600 |
| Direct | 600 |
| VOLUME II | |
| C. W. Pearson (Recalled), . . . | 657 |
| Direct | 657 |
| Robert S. Quig (Recalled), . . . | 667 |
| Cross | 725 |
| Harold L. Dalbeck (Recalled), . . | 730 |
| Direct | 730 |
| Cross | 741 |
| Harry Hanson (Recalled), | 745 |
| Direct | 745 |
| Cross | 750 |
| William Webster (Recalled), . . . | 752 |
| Direct | 752 |
| Cross | 759 |
| Harry Hanson (Recalled), | 776 |
| Direct | 776 |
| Cross | 777 |
| C. W. Pearson (Recalled), | 778 |
| Cross | 813 |
| Thomas Johnson (Recalled), | 838 |
| Samuel Gishman (Recalled), | 872 |
| Cross | 873 |
| Thomas Johnson (Resumed), | 874 |
| Cross | 874 |
| Redirect | 930 |
| Robert Cahal (Recalled), | 930 |
| Samuel Gishman (Resumed) | 940 |
| Robert Ross Cahal, Jr. (Resumed), | 946 |
| James F. Simes (Recalled), | 961 |
| Cross | 961 |
| Direct | 976 |
| Cross (cont.) | 979 |
| Robert S. Quig (Recalled), | 1113 |
| Cross | 1113 |
| Harry Hanson (Recalled), | 1144 |
| Cross | 1144 |
| Robert F. Krause (Resumed), | 1164 |
| Cross | 1164 |
| Harold L. Dalbeck (Recalled), | 1195 |
| Cross | 1195 |
| Samuel Gishman | 1238 |
| Cross (cont.) | 1238 |

| | Page |
|---|------|
| Findings and Opinion of the Commission | 1254 |
| Order Requiring Divestment of Non-Retainable Properties and Permitting Retention of Service Company | 1280 |
| Appendix to Findings and Opinion of the Commission | 1282 |
| Application of Respondents for stay pending judicial review | 1283 |
| Order Granting Stay | 1284 |
| Proceedings in Court of Appeals: | |
| Petition to Review and Set Aside | 1286 |
| Stipulation as to Record to be Printed | 1294 |

VOLUME III

Respondents' Exhibit:

| | |
|--------------|------|
| No. 3 | 1297 |
| No. 50 | 1299 |
| No. 51 | 1301 |
| No. 52 | 1303 |
| No. 53 | 1305 |
| No. 54 | 1307 |
| No. 55 | 1308 |
| No. 56 | 1309 |
| No. 57 | 1310 |
| No. 59 | 1311 |
| No. 60 | 1313 |
| No. 62 | 1315 |
| No. 63 | 1316 |
| No. 64 | 1317 |
| No. 65 | 1318 |
| No. 66 | 1337 |
| No. 67 | 1338 |
| No. 68 | 1339 |
| No. 69 | 1340 |
| No. 70 | 1341 |
| No. 71 | 1342 |
| No. 73 | 1343 |

Index

| | |
|-------------------|------|
| No. 82 | 1345 |
| No. 83 | 1347 |
| No. 84 | 1349 |
| No. 85 | 1350 |
| No. 86 | 1351 |
| No. 87A | 1352 |
| No. 88 | 1353 |
| No. 89 | 1355 |
| No. 90 | 1365 |
| No. 92 | 1367 |
| No. 92A | 1369 |
| No. 93 | 1371 |
| No. 94 | 1372 |
| No. 104 | 1373 |
| No. 104A | 1377 |
| No. 105 | 1379 |
| No. 106 | 1393 |
| No. 107 | 1395 |
| No. 108 | 1397 |
| No. 109 | 1397 |
| No. 110 | 1405 |
| No. 111 | 1408 |
| No. 112 | 1411 |
| No. 113 | 1423 |
| No. 113A | 1426 |
| No. 114 | 1431 |
| No. 116 | 1432 |
| No. 117 | 1436 |
| No. 118 | 1437 |
| No. 119 | 1438 |
| Division Exhibit: | |
| No. 1 | 1439 |
| No. 2 | 1443 |
| No. 3A | 1444 |
| No. 3B | 1445 |

ADDITION TO VOLUME III

| | Original | Print |
|---|----------|-------|
| Proceedings in the United States Court of Appeals for the First Circuit----- | 1455 | 1455 |
| Opinion, Aldrich, Ch. J.----- | 1455 | 1455 |
| Judgment----- | 1476 | 1471 |
| Clerk's certificate (omitted in printing)----- | 1477 | 1472 |
| Order allowing certiorari----- | 1479 | 1472 |



Table of Contents

v

| | Page |
|--------------|------|
| No. 3C | 1446 |
| No. 3D | 1447 |
| No. 4A | 1449 |
| No. 4B | 1450 |
| No. 4C | 1451 |
| No. 4D | 1452 |
| No. 5 | 1453 |

VOLUME IV

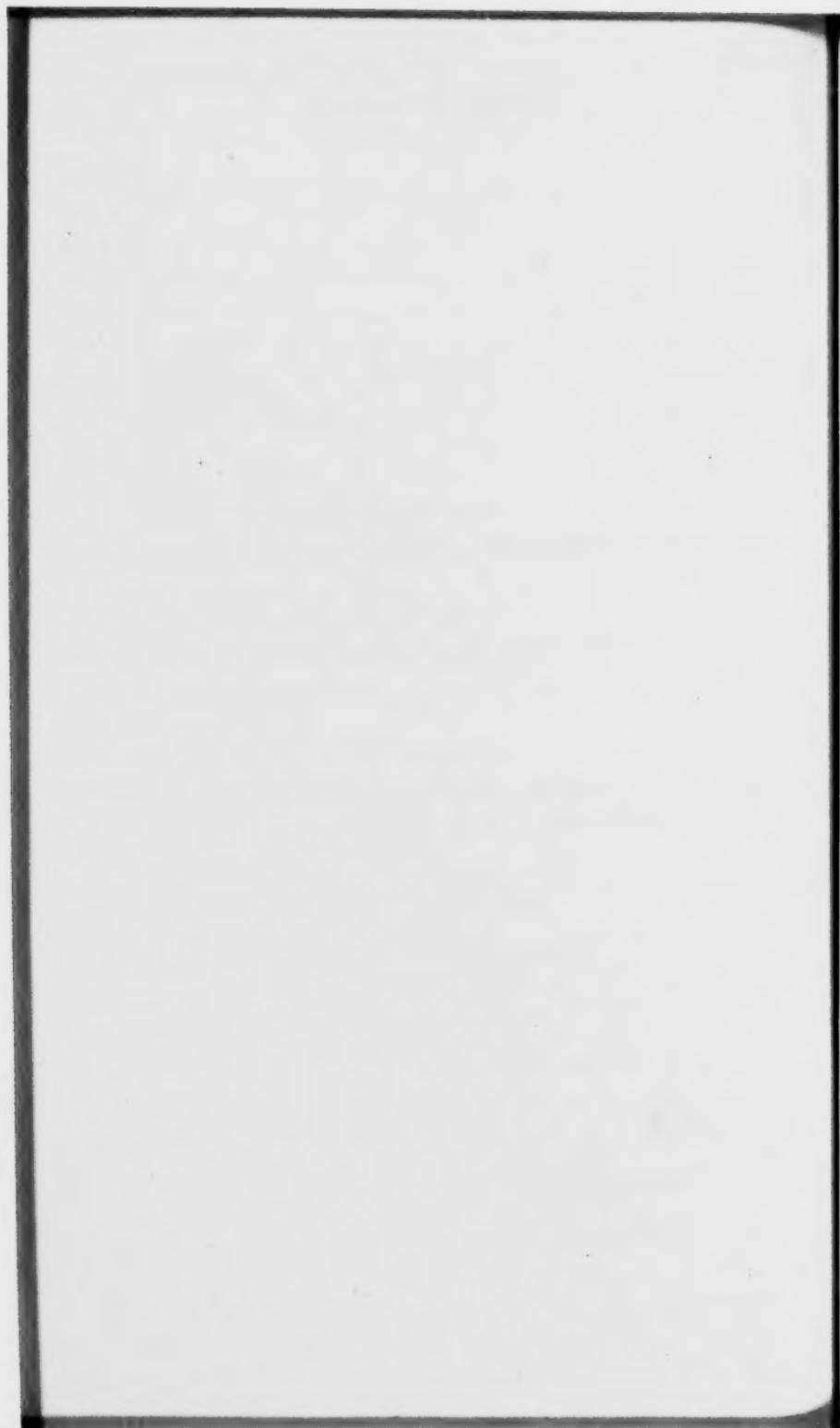
Respondents' Exhibit 58A—First Volume of Ebasco Report

VOLUME V

Respondents' Exhibit 58B—Second Volume of Ebasco Report

VOLUME VI

Respondents' Exhibit 91—Third (Supplemental) Volume
of Ebasco Report



RELEVANT DOCKET ENTRIES BELOW

1. Notice and order of the Commission dated August 5, 1957 for hearing pursuant to section 11(b)(1) of the Public Utility Holding Company Act of 1935.
2. Joint Answer of all Respondents filed September 30, 1957.*
3. Respondents' Motion to Dismiss filed January 2, 1958.
4. Findings and Opinion and Order of the Commission dated February 20, 1958 dismissing proceedings in respect of certain issues.
5. Order of the Commission dated February 8, 1960 reconvening hearing.
6. Notice of Appearance and Answer of The Commonwealth of Massachusetts, Department of Public Utilities.
7. Findings and Opinion and Order of the Commission dated March 19, 1964.
8. Application of Respondents for stay of order pending judicial review.
9. Order of Commission dated June 25, 1964 granting stay.

* References to "Respondents" are to be Petitioners herein who were Respondents before the Commission.

UNITED STATES OF AMERICA
BEFORE THE
SECURITIES AND EXCHANGE COMMISSION
August 5, 1957

In the Matter of
NEW ENGLAND ELECTRIC SYSTEM
AND
ITS SUBSIDIARY COMPANIES
RESPONDENTS
File No. 59-102

(Public Utility Holding Company Act of 1935)

NOTICE OF AND ORDER FOR HEARING
PURSUANT TO SECTION 11(b)(1) OF THE
PUBLIC UTILITY HOLDING COMPANY
ACT OF 1935

The Commission having been advised by its Division of Corporate Regulation ("Division") that the Division, pursuant to Sections 11(a), 18(a) and 18(b) of the Public Utility Holding Company Act of 1935 ("Act"), has examined the corporate structure of New England Electric System, the corporate structure of its subsidiary companies, the relationships among the companies in the holding company system, the character of the interests thereof and the properties owned or controlled thereby; and it appearing to the Division from such examination that:

I

1. New England Electric System ("NEES"), a voluntary association created in 1926 in Massachusetts by Agreement and Declaration of Trust, is solely a holding company and is registered as such under Section 5 of the Act. It maintains its principal offices in the city of Boston, Massachusetts.

2. As of December 31, 1956, NEES had 32 subsidiaries, of which 16 were engaged exclusively in the electric business, one was engaged in the electric and gas business, one was in the process of constructing a nuclear power plant, eight were engaged exclusively in the gas business, one owns land, four were inactive and one was engaged in the business of rendering services for system companies. Taken together these subsidiaries conduct their businesses in the States of Connecticut, Massachusetts, New Hampshire, Rhode Island and Vermont, comprising an area of about 4,500 square miles and having a total population in excess of 2,200,000 persons.

3. (a) The names of the subsidiary companies embraced in the holding company system of NEES as of December 31, 1956, their relationships being indicated by indentation, the states of organization and operation, the nature of their business and the percentage of voting securities owned by system companies are shown in the following table:

35 - 13525

| | % of Voting Control | State of Organization | State of Operations | Nature of Business |
|---|---------------------|-----------------------|---------------------|---------------------------|
| New England Electric System | — | Mass. | — | Holding Company |
| * Amesbury Electric Light Company | 99.71 | Mass. | Mass. | Electric |
| Attleboro Electric Company | 100.00 | Mass. | Mass. | Electric |
| Bellows Falls Hydro-Electric Corporation | 100.00 | N. H./ Vt. | — | Inactive |
| Central Massachusetts Gas Company | 100.00 | Mass. | Mass. | Gas |
| Connecticut River Development Company | 100.00 | Mass. | Mass. | Owning Properties |
| Essex County Electric Company | 97.49 | Mass. | Mass. | Electric |
| Granite State Electric Company | 100.00 | N. H. | N. H. | Electric |
| * Haverhill Electric Company | 69.30 | Mass. | Mass. | Electric |
| * Lawrence Electric Company | 90.70 | Mass. | Mass. | Electric |
| Lawrence Gas Company | 90.42 | Mass. | Mass. | Gas |
| *The Lowell Electric Light Corporation | 61.18 | Mass. | Mass. | Electric |
| The Mystic Power Company | 100.00 | Conn. | Conn. | Electric |
| Mystic Valley Gas Company | 99.41 | Mass. | Mass. | Gas |
| The Narragansett Company | 100.00 | R. I. | — | Inactive |
| *The Narragansett Electric Lighting Company | 99.98 | R. I. | — | Electric, gas |
| The Narragansett Electric Company | 100.00 | R. I. | Mass., N. H./Vt. | Electric, holding company |
| New England Power Company | 96.86 | Mass. | Mass. | Electric |
| Yankee Atomic Electric Company | 30.00 | Mass. | Mass. | Service Company |
| New England Service Company | 100.00 | Mass. | Mass. | — |
| Northampton Electric Lighting Company | 100.00 | Mass. | Mass. | Electric |
| Northampton Gas Light Company | 100.00 | Mass. | Mass. | Gas |
| Northern Berkshire Electric Company | 100.00 | Mass. | Mass. | Electric |
| North Shore Gas Company | 97.07 | Mass. | Mass. | Gas |
| Norwood Gas Company | 99.38 | Mass. | Mass. | Gas |

| | <i>% of Voting Control</i> | <i>State of Organization</i> | <i>State of Operations</i> | <i>Nature of Business</i> |
|---|--------------------------------|----------------------------------|--------------------------------|-------------------------------|
| The Pequot Gas Company | 100.00 | Conn. | Conn. | Gas |
| Quincy Electric Company | 100.00 | Mass. | Mass. | Electric |
| Southern Berkshire Power & Electric Company | 99.66 | Mass. | Mass. | Electric |
| Suburban Electric Company | 98.73 | Mass. | Mass. | Electric |
| Wachusetts Gas Company | 100.00 | Mass. | Mass. | Gas |
| Weymouth Light and Power Company | 99.70 | Mass. | Mass. | Electric |
| Worcester County Electric Co. | 99.31 | Mass. | Mass. | Electric |
| Yellow Cab Company | 100.00 | R. I. | — | Inactive |

*These companies are in process of merging into Essex County Electric Company pursuant to an order issued by this Commission on May 23, 1957 (Holding Company Act Release No. 13480).

The above tabulation of subsidiaries does not include Lynn Gas and Electric Company ("Lynn"), a Massachusetts corporation which is engaged in the electric and gas business in that State. NEES has, subsequent to December 31, 1956, acquired approximately 94% of the voting securities of Lynn pursuant to an order of this Commission issued April 22, 1957 (Holding Company Act Release No. 13456).

(b) As indicated above, New England Power Company ("Nepeo") is an electric utility company and also a holding company by virtue of its ownership of 30% of the voting securities of Yankee Atomic Electric Company ("Yankee"), which was organized in 1954 for the purpose of constructing and operating an atomic nuclear power plant of approximately 134,000 Kw capacity. The plant is to be located in western Massachusetts, is scheduled for completion in 1960 and the output of the plant will be sold to 12 New England utility companies which are stockholders of Yankee. Nepeo's acquisition of shares of Yankee's stock was effected pursuant to an order of this Commission dated December 18, 1956 (Holding Company Act Release No. 13339). Concurrently therewith Nepeo's application for an exemption as a holding company was granted but Nepeo as a subsidiary of NEES and Yankee as a subsidiary of Nepeo remain subject to various provisions of the Act as subsidiaries of a registered holding company.

4. (a) The consolidated gross operating revenues of the NEES system for the twelve months ended December 31, 1956 (excluding Lynn) amounted to \$142,385,041, including \$125,294,786 from the sale of electric energy, and \$16,521,875 from the sale of gas. Other revenues, consisting principally of rentals, aggregated \$568,380.

(b) As at December 31, 1956, the system's property account, excluding the properties of Lynn, was as follows:

Property, plant and equipment
including intangibles: (a)

| | |
|--------------------------------|-------------------|
| Electric plant | \$475,914,408 |
| Gas plant | 44,320,843 |
| Construction work in progress | 52,411,921 |
| Other | 1,195,096 |
| Total | \$573,842,268 |
| Less reserves for depreciation | 102,296,664 |

Net property, plant and equipment,
including intangibles \$471,545,604
(a) \$457,788,400 of the gross property account is
stated at original cost.

II

5. (a) The electric utility operations in the NEES system (including those of Lynn and reflecting the Essex merger) are conducted by 14 electric utility subsidiaries, two of which are also engaged in gas utility operations. These subsidiaries render retail electric service in 198 municipalities of which 146 are in Massachusetts, 27 in Rhode Island, 21 in New Hampshire and 4 in Connecticut. The total area served is in excess of 4500 square miles and the total population is about 2,350,000 persons. In addition, some of the subsidiary companies sell electric energy at wholesale for resale to various non-affiliated utilities and municipalities. Many of these municipalities purchase their entire electric energy requirements, and utilities serving a large portion of Vermont purchase substantial portions of their requirements from system companies.

(b) The electric energy requirements of the system companies (excluding Lynn) for 1956 were supplied largely by 12 steam-electric and 22 hydro-electric generating stations owned and operated by system companies, 76% being

generated by system companies and 24% being purchased at a cost of \$14,057,032. The principal source of purchased power from non-affiliated companies is Boston Edison Company which during 1956 delivered 746.5 million Kwh at an aggregate cost of \$9,059,297. Of the total energy generated by the system companies, about 98% was produced by Nepeo, The Narragansett Electric Company and Worcester County Electric Company.

6. The nature and locale of the electric operations of the subsidiaries in the NEES system are as follows:

(a) Nepeo is an exempt holding company and an electric utility company engaged in the generation, purchase, transmission and sale of electric energy in wholesale quantities to associate and other electric utility companies doing a retail distribution business and to large industrial customers. Nepeo operates in the States of Massachusetts, New Hampshire and Vermont but has no residential or commercial customers. During 1956 Nepeo generated 2,299,222,565 Kwh of which about 53.6% was produced by steam-electric stations and 46.4% by hydro-electric stations. It purchased 1,751,867,850 Kwh of which about 48.6% was obtained from associates and 51.4% from non-affiliates, principally from Boston Edison Company and Niagara Mohawk Power Corporation. Nepeo's gross plant at December 31, 1956 amounted to \$190,818,000 and its gross operating revenues from the sale of electric energy, for the 12 months ended December 31, 1956, amounted to \$49,762,800 of which \$36,172,800 was derived from sales to affiliates, \$7,190,000 from sales to non-system utilities and \$6,400,000 from direct sales to large industrial users.

(b) Narragansett Electric Company ("Narragansett") owns and operates facilities for the generation, transmission, distribution and sale of electric energy and the production, transmission and distribution of gas. Its business is conducted in the larger part of Rhode Island

where, in 1956, electric service was provided to 196,300 customers in 27 cities and towns, including Providence, within an area of about 870 square miles having an aggregate population of about 544,000 persons. Its electric energy requirements are supplied almost entirely by its own generating facilities and electric energy is sold for resale to three associate companies in the NEES system and to three non-affiliated utility companies. During 1956 Narragansett generated 1,881,215,278 Kwh and sold 686,887,630 to associate companies in the NEES system and 69,223,675 to non-affiliated companies. At December 31, 1956 Narragansett's gross electric utility plant amounted to \$138,653,556 and for the calendar year ended that date its gross operating revenues from electric sales amounted to \$34,633,174.

(c) Worcester County Electric Company ("Worcester") owns and operates facilities for the generation, transmission and distribution of electric energy to about 200,000 customers in 77 cities and towns located in central Massachusetts, covering an area of about 1900 square miles and having a population of about 544,000 persons. During 1956 Worcester generated about 22% of its electric energy requirements and purchased about 77% from Nepco and a minor amount from another associate (Lowell) and non-affiliates. Its gross operating revenues in the 12 months ending December 31, 1956 amounted to \$31,441,512 and at that date the company had gross electric utility plant of \$78,285,869.

(d) Suburban Electric Company ("Suburban") owns and operates facilities for the distribution of electric energy to about 79,300 customers in six suburban cities and towns north of Boston within an area of 29 square miles with an aggregate population of about 257,000 persons. In 1956 Suburban purchased substantially all of its electric requirements from Nepco and sold comparatively minor

amounts of electricity to Boston Edison Company, a non-affiliate. For the twelve months ended December 31, 1956 Suburban had gross operating revenues of \$10,661,493 and at that date its gross electric utility plant amounted to \$21,387,610.

(e) Essex County Electric Company ("Essex") will be the survivor by merger of five electric utility companies.¹ Taken together these five companies, in 1956, owned and operated facilities for the generation, transmission, distribution and sale of electric energy. In 1956 they provided electric service to 161,600 customers in 26 cities and towns in northeastern Massachusetts, within an area of 460 square miles, having an aggregate population of about 464,000 persons. The five constituent companies have their own generating plants and, during 1956, produced 75,473,813 Kwh. With the exception of Amesbury, the entire net output of electric energy of these companies was sold to Nepeo and substantially all their individual requirements were purchased from Nepeo. The energy generated by Amesbury is used in its own operating area and additional requirements are purchased from one of the constituent companies (Haverhill). Amesbury also has an agreement with Nepeo for standby and emergency service over a tie line with a non-affiliated company, i.e., Public Service Company of New Hampshire. During 1956 the five companies had combined gross operating revenues of \$27,400,000. Their combined gross fixed property, at December 31, 1956, amounted to \$60,198,060.

(f) Attleboro Electric Company ("Attleboro") owns and operates facilities for the distribution of electric energy

¹ Essex County Electric Company, Amesbury Electric Light Company, Haverhill Electric Company, Lawrence Electric Company and The Lowell Electric Light Corporation. Upon consummation of the merger, it is expected that Essex will change its name to Merrimack-Essex Electric Company.

in Attleboro, Massachusetts and vicinity. During 1956 the company purchased approximately 97% of its energy requirements from Nepeo, less than 3% from Narragansett, and a minor amount from non-affiliates. During the calendar year 1956, Attleboro served an average of 14,689 customers with electricity and derived gross operating revenues of \$2,552,416 from such service. The company's gross electric utility plant at December 31, 1956 amounted to \$4,792,263.

(g) Granite State Electric Company ("Granite") owns and operates facilities for the production, transmission and distribution of electric energy in western New Hampshire. During 1956, it produced approximately 13.1% of its energy requirements, and purchased 20.2% of its energy from Lawrence and 66.7% from Nepeo. Granite served an average of 12,062 customers during the year. Its gross operating revenues for the twelve months ended December 31, 1956 amounted to \$1,611,834 and gross electric utility plant at that date totaled \$4,459,996.

(h) Lynn Gas and Electric Company is a gas and electric utility providing services in the northeastern portion of Massachusetts. It also sells electric and gas appliances. In 1956 electric service at retail was provided to about 47,000 customers in four communities. Lynn also supplies at wholesale about 95% of the electricity requirements of the town of Marblehead. During 1956 Lynn generated approximately 86% of its electric energy requirements, the balance being purchased from Nepeo. The area served with electricity lies between the areas served by two associate electric utility companies in the NEES system. The electric property of Lynn at December 31, 1956 amounted to \$19,303,619 and its total electric operating revenues for the twelve months ended December 31, 1956 amounted to \$6,309,564.

(i) The Mystic Power Company ("Mystic Power")

owns and operates facilities for the transmission and distribution of electric energy to about 7,200 customers in Stonington and Groton, Connecticut. The company purchases all of its energy requirements from Narragansett. Gross electric utility plant at December 31, 1956 amounted to \$1,889,296 and gross operating revenues for the twelve months then ended aggregated \$1,057,059.

(j) Northampton Electric Lighting Company ("Northampton") owns and operates facilities for the transmission and distribution of electric energy in Northampton, Massachusetts and vicinity. The company purchases substantially all of its energy requirements from Nepeco. During the calendar year 1956, the company provided electric service to an average of 9,283 customers and derived gross operating revenues of \$1,520,944. As at December 31, 1956, Northampton's gross electric utility plant amounted to \$2,312,741.

(k) Northern Berkshire Electric Company ("Northern Berkshire") owns and operates facilities for the transmission and distribution of electric energy in Adams and North Adams, Massachusetts and vicinity. During 1956 the company purchased over 99% of its energy requirements from Nepco, served an average of 16,126 customers and derived gross operating revenues of \$2,602,381. As at December 31, 1956, the company's gross electric utility plant amounted to \$4,427,617.

(l) Quincy Electric Company ("Quincy") owns and operated facilities for the distribution of electric energy in Quincy, Massachusetts. During 1956, the company purchased its entire energy requirements from Boston Edison Company, a non-affiliate and, in turn, provided Weymouth Light and Power Company, an associate, with substantially all of its energy requirements. During 1956 Quincy served an average of 28,317 customers and derived gross operating revenues of \$5,737,262. As at December 31, 1956, Quincy's gross electric utility plant amounted to \$6,374,791.

(m) Southern Berkshire Power & Electric Company ("Southern Berkshire") owns and operates facilities for the production, transmission and distribution of electric energy in southwestern Massachusetts. During the year 1956, the company served an average of 7,775 customers and derived \$1,184,461 in gross operating revenues. The company produced less than 10% of its energy requirements and purchased substantially all of the balance from Nepeo. As at December 31, 1956, Southern Berkshire had gross electric utility plant amounting to \$3,386,490.

(n) Weymouth Light and Power Company ("Weymouth") owns and operates facilities for the production, transmission and distribution of electric energy in Hingham, Randolph and Weymouth, Massachusetts. The company purchases substantially all of its energy requirements from Quiney. During the calendar year 1956, the company served an average of 19,988 customers, and derived gross operating revenues of \$3,158,735. Its gross electric utility plant at December 31, 1956 amounted to \$6,565,775.

III

7. (a) The gas business of the NEES system is conducted by eight gas utility subsidiaries and two combination gas and electric utility subsidiaries (Lynn and Narragansett). As of December 31, 1956 the gas plant of these ten subsidiaries amounted to \$52,462,139 and the consolidated gross operating revenues from the sale of gas, for the twelve months period ending December 31, 1956, amounted to \$19,667,944. In general, the gas operations of these subsidiaries are carried on in parts of the same, or adjacent territory to that of the retail electric operations in the NEES system. In 1956 gas service was provided in 52 municipalities, of which 48 were in Massachusetts, 3 in Rhode Island, and 1 in Connecticut. The total area served with gas is in excess of 700 square miles having a total

population of about 1,070,000 persons. During 1956 an average of about 240,000 customers were served over approximately 2,300 miles of gas mains.

(b) Natural gas is distributed by the gas subsidiaries (including Lynn) with manufactured gas used for peak shaving and standby purposes. The natural gas is purchased from two non-affiliated natural gas pipe line companies, i.e., Tennessee Gas Transmission Company ("Tennessee") and Algonquin Gas Transmission Company ("Algonquin"). Orders of the Federal Power Commission authorize daily deliveries of natural gas up to 75,695 Mcf by Tennessee and up to 4,450 Mcf by Algonquin. The manufactured gas facilities of the subsidiaries of NEES, available for peak shaving and standby purposes have a total rated capacity of 50,800 Mcf per day. Storage holder capacity totaled 23,977 Mcf.

(c) During 1952 NEES established an independent gas division to provide the Massachusetts gas subsidiaries with separate management and sales personnel. Earnings of these properties in 1956 contributed \$1,614,516 to consolidated net income as compared with \$255,504 in 1951. Sales of appliances also increased with total appliance sales by this division, in 1956, aggregating \$2,167,000 including about 6,000 heating installations. This division also has installed more than 10,700 automatic water heaters under a rental program started in January 1955.

8. A summary description of the electric business of the two combination gas and electric utility companies, i.e., Narragansett and Lynn has been set forth in subparagraphs (b) and (h) of paragraph 6 above. The gas business of these two subsidiaries and the other eight gas utility companies are briefly described as follows:

(a) Lynn owns and operates facilities for the production, transmission and distribution of gas. It purchases natural gas from Tennessee and distributes such gas at

retail to about 40,000 customers in communities supplied by Lynn with electric service in northeastern Massachusetts and, in addition, in Lynnfield, Marblehead and small areas of Peabody and Revere. Gas appliances are also sold by Lynn. Lynn's gas properties consist of a manufactured gas plant and two storage holders to supplement the natural gas supply and 357 miles of gas mains. At December 31, 1956 its gas properties amounted to \$8,141,296 and gross operating revenues for the twelve months ended December 31, 1956 from the sale of gas amounted to \$3,159,628.

(b) Narragansett owns and operates facilities for the production, transmission and distribution of gas in Warren, Bristol and Westerly, Rhode Island to about 6,700 customers. It purchases more than 99% of its gas requirements from Algonquin. In addition to the gas sold to general customers, Narragansett has a contractual arrangement to supply standby service to its associate gas utility The Pequot Gas Company. At December 31, 1956 Narragansett's gas properties amounted to \$1,975,989 and its gross operating revenues derived from the sale of gas during the calendar year 1956 amounted to \$446,553.

(c) Central Massachusetts Gas Company ("Central Massachusetts") owns and operates facilities for the transmission and distribution of natural gas to about 9,500 customers in 10 communities and surrounding area in south central Massachusetts. The company purchases all of its gas requirements from Tennessee. As at December 31, 1956 its gross gas utility plant amounted to \$2,104,640 and gross operating revenues for the twelve months then ended aggregated \$794,961.

(d) Lawrence Gas Company ("Lawrence") owns and operates facilities for the production, transmission and distribution of gas in Lawrence, Massachusetts and three nearby communities in the northeastern part of the State.

The company serves approximately 33,000 customers. During the year 1956, Lawrence produced less than 1% of its gas requirements and purchased the remainder from Tennessee. The company's plant account totalled \$5,238,030 at December 31, 1956 and operating revenues aggregated \$2,480,960 for the twelve months ended that date.

(e) Mystic Valley Gas Company ("Mystic Valley") owns and operates facilities for the production, transmission and distribution of gas to 16 communities in eastern Massachusetts, including Arlington, Everett, Malden and Medford. During the twelve months ended December 31, 1956, the company served approximately 98,000 customers and derived \$8,136,035 in gross operating revenues from such operations. Mystic Valley produced less than 1% of its gas requirements, purchased a minor amount of gas from a nearby non-affiliate, and obtained the balance of its requirements from Tennessee. The company's property account amounted to \$21,967,385 at December 31, 1956.

(f) Northampton Gas Light Company ("Northampton") owns and operates facilities for the production, transmission and distribution of gas to approximately 8,000 customers in Northampton and Easthampton, Massachusetts. Gross operating revenues during the year 1956 amounted to \$675,322. Northampton produced less than 1% of its gas requirements and purchased the balance from Tennessee. The company's plant account amounted to \$1,749,615 at December 31, 1956.

(g) North Shore Gas Company ("North Shore") owns and operates facilities for the production, transmission and distribution of gas to approximately 33,000 customers in six communities located in northeastern Massachusetts, including Beverly, Gloucester and Salem. The company produces less than 1% of its gas requirements and purchases the remainder from Tennessee. Gross operating revenues for the twelve months ended December 31, 1956

aggregated \$2,900,012 and gas utility plant at that date totalled \$9,023,246.

(h) Norwood Gas Company ("Norwood") owns and operates facilities for the distribution of natural gas to about 4,200 customers in Norwood, Massachusetts. The company purchases its entire supply of natural gas from Algonquin. Its gross operating revenues for the twelve months ended December 31, 1956 amounted to \$381,993 and gas utility plant at that date aggregated \$953,213.

(i) The Pequot Gas Company ("Pequot") owns and operates facilities for the transmission and distribution of gas to approximately 1,200 customers in Stonington, Connecticut. Pequot purchased its entire supply of natural gas from Algonquin during the calendar year 1956 and paid Narragansett a charge for the transportation of gas and a demand charge for manufactured gas, although no manufactured gas was received into the system during the year. The company's gross operating revenues for the twelve months ended December 31, 1956 aggregated \$101,860 and its total utility plant at that date amounted to \$204,383.

(j) Wachusett Gas Company ("Wachusett") owns and operates facilities for the production, transmission and distribution of gas in north central Massachusetts. During 1956, the company produced less than 1% of its gas requirements and purchased the balance from Tennessee. Gas was sold to approximately 8,100 customers from which the company derived revenues of \$682,105. Wachusett's total utility plant account at December 31, 1956 amounted to \$1,551,146.

IV

9. The Division avers that the foregoing allegations, and the facts otherwise disclosed in the course of its examination of the NEES system, indicate or tend to indicate that:

(a) The holding company system of NEES is not confined in its operations to those of a single integrated public-utility system, and to such other businesses as are reasonably incidental, or economically necessary or appropriate to the operations of such integrated public-utility system;

(b) The various gas utility assets and the electric utility assets owned or controlled, directly or indirectly, by NEES and other respondents cannot continue to be controlled by NEES under the standards of Section 11(b)(1), particularly clauses (A), (B) and (C) thereof; and

(c) The various businesses of some of the subsidiaries of NEES, other than the business of a public-utility company as such, may not be retainable as reasonably incidental or economically necessary or appropriate to the operations of either the electric or gas public-utility systems.

V

It appearing to the Commission, on the basis of the above allegations of the Division of Corporate Regulation, that a proceeding should be instituted under Section 11(b)(1) of the Act with respect to the New England Electric System holding company system:

IT IS ORDERED that proceedings be and the same hereby are instituted under Section 11(b)(1) of the Act with respect to the New England Electric System and each of its subsidiary companies hereinbefore named, all of which are made respondents herein.

IT IS FURTHER ORDERED, pursuant to the applicable provisions of the Act, that a hearing be held at the offices of the Securities and Exchange Commission, 425 Second Street, N. W., Washington 25, D. C. on November 12, 1957, at 10:30 A. M. On such day the hearing room clerk in Room 193 will advise as to the room where such hearing will be held. At such time respondents and any other

interested persons will be heard with respect to the matters and questions hereinafter set forth.

IT IS FURTHER ORDERED that such respondents shall file with the Secretary of the Commission on or before September 30, 1957, their joint or several answers in the form prescribed by Rule U-25 under the Act admitting, denying, or otherwise explaining their respective positions as to each of the allegations of Parts I, II, III and IV hereof. The answer should state which of the properties and facilities of the New England Electric System holding company system constitutes the retainable "single integrated public utility system". Any such answer may include a statement of the claim of the respondents, or any of them, as to (a) the action, if any, which is necessary and should be required to be taken by any of the respondents (including the divestment of control, securities or other assets), to limit the operations of the system to a single integrated public-utility system; (b) the extent to which the system should be permitted to continue to control, in addition to its claimed "single integrated public utility system", one or more additional integrated public-utility systems as may meet the requirements of Clauses (A), (B) and (C) of Section 11(b)(1) of the Act; and (c) the extent to which any of said respondents should be permitted to own, operate or control any business (other than the business of a public-utility company as such) as reasonably incidental or economically necessary or appropriate to the operations of such integrated public-utility system or systems. Any such answer may, if such respondents so desire, state that they propose and are prepared to take such action as will cause them to comply with Section 11(b)(1) within the meaning of the Act, together with a description of such action and the time within which they propose to take action.

The Division of Corporate Regulation having advised the Commission that, upon the basis of its preliminary

examination of the New England Electric System holding company system, the following matters and questions are presented for consideration, without prejudice to its specifying additional matters and questions upon further examination:

- (a) Whether the electric utility assets of the New England Electric System holding company system constitute a single integrated electric utility system or more than one such system;
- (b) Whether the gas utility companies of the New England Electric System holding company system constitute a single integrated gas utility system or more than one such system;
- (c) The nature, extent and location of the "single integrated public-utility system" of the New England Electric System holding company system;
- (d) Whether, in addition to the New England Electric System holding company system's "single integrated public-utility system", any of its additional electric or gas utility systems may be retained under common control under the provisions of Section 11(b)(1) of the Act, specifically Clauses (A), (B) and (C) thereof;
- (e) Whether any of the non-utility businesses conducted by the New England Electric System holding company system are reasonably incidental, or economically necessary or appropriate to the operations of the integrated public-utility system or systems retainable under common control;
- (f) What action is necessary to be taken by the New England Electric System holding company system to limit the operations of the system to those of a single integrated public-utility system, together with such additional utility systems, and such other businesses, if any, as are retainable under the standards of Section 11(b)(1) of the Act;

IT IS FURTHER ORDERED that at the aforesaid hearing, attention be given to the foregoing matters and questions.

IT IS FURTHER ORDERED that William W. Swift or any other hearing officer or hearing officers of the Commission designated by it for that purpose shall preside at the hearing in such matter. The hearing officer so designated to preside at any such hearing is hereby authorized to exercise all powers granted to the Commission under Section 18(c) of the Act and to a hearing officer under the Commission's Rules of Practice.

IT IS FURTHER ORDERED that jurisdiction be, and hereby is, reserved to separate, either in whole or in part, or for disposition in whole or in part, any of the issues or questions which may arise in these proceedings, or to consolidate these proceedings, or any portion thereof, with any proceedings which may be instituted subsequently under other provisions of said Act with respect to New England Electric System and its subsidiaries, and to take such other action as may appear conducive to an orderly, prompt and economic disposition of the matters involved.

IT IS FURTHER ORDERED that any person desiring to be heard in connection with these proceedings or proposing to intervene herein shall file with the Secretary of the Commission, not later than five days prior to the date hereinbefore fixed as the date for said hearing, his request or application therefore, as prescribed by Rule XVII of the Rules of Practice of the Commission. Such request shall set forth the nature of the applicant's interest in the proceedings, his reasons for requesting to be heard or to intervene, which of the allegations and issues, as hereinbefore set forth, applicant proposes to controvert, together with a statement of any additional issues which the applicant proposes to raise with respect to the proceedings herein instituted.

IT IS FURTHER ORDERED that the Secretary of the Com-

mission shall serve notice of the hearing aforesaid by mailing a copy of this Notice of and Order for Hearing by registered mail not less than 30 days prior to the date fixed therefor to each of the respondent companies, the Federal Power Commission; the Connecticut Public Utilities Commission; the Department of Public Utilities of Massachusetts; the Public Utilities Commission of New Hampshire; the Public Utility Administrator; Department of Business Regulation of the State of Rhode Island; and the Public Service Commission of Vermont; and that notice of said hearing is hereby given to the aforesaid and to all states, municipalities, and political subdivisions of states within which are located any of the physical assets of the respondent companies, to all state commissions, state security commissions, and all agencies, authorities or instrumentalities of any state, municipality, or other political subdivision having jurisdiction over any of the respondent companies or any of the business affairs or operations of any of them, and to all other interested persons, such notice to be given by a general release of the Commission, distributed to the press and mailed to the mailing list for releases issued under the Act; and by publication of this Notice and Order in the Federal Register not later than 30 days prior to the date hereinbefore fixed as the date of hearing.

By the Commission.

(s) ORVAL L. DUBoIS
Secretary

JOINT ANSWER OF ALL RESPONDENTS

Pursuant to Part V of the Commission's Notice of and Order for Hearing dated August 5, 1957 in the above entitled proceedings, the Respondents file this joint Answer. The abbreviations contained in said Notice and Order are adopted in this Answer.

I.

In certain comparatively minor respects the allegations in Parts I, II and III of said Notice and Order are not accurate. Attached as a part of this Answer is a schedule marked "A" correcting such inaccuracies. As so corrected the Respondents admit said allegations.

II.

The Respondents deny the allegations of Part IV of said Notice and Order.

III.

Further answering, the Respondents aver that:

1. The properties and facilities of such of the Respondents as are electric utility companies (including the electric assets of such of them as are also gas utility companies), together with Nepco's interest in Yankee Atomic Electric Company, constitute a single integrated public-utility system retainable under the Act, and the properties, facilities and businesses of New England Power Service Company either are integral parts of said system or are retainable, and the Respondents should be permitted to own and operate them, as reasonably incidental or economically necessary or appropriate to the operations of said system; and Respondents request that an interim order of the Commission be entered to such effect as soon as may be feasible.

2. In the event that any of the properties and facilities referred to in paragraph 1 above are not retainable as part of a single integrated public-utility system they are retainable, and the Respondents should be permitted to continue to control them, as one or more additional integrated public-utility systems which meet the requirements of clauses (A), (B) and (C) of Section 11(b)(1) of the Act.

3. The properties and facilities of such of the Respond-

ents as are gas utility companies (including the gas assets of such of them as are also electric utility companies) are either retainable as parts of the single integrated public-utility system referred to in paragraph 1 above, or are retainable, and the Respondents should be permitted to continue to control them, as one or more additional integrated public utility systems which meet the requirements of clauses (A), (B) and (C) of Section 11(b)(1) of the Act.

4. To the extent that the Respondents or any of them are engaged in any business other than the business of a public-utility company as such, such business is reasonably incidental or economically necessary or appropriate to the operations of the retainable integrated public-utility system or systems, and the Respondents should be permitted to continue to own, operate and control it as such.

**NEW ENGLAND ELECTRIC
SYSTEM**

By (s) IRWIN L. MOORE, *Pres.*
ATTLEBORO ELECTRIC COMPANY
By (s) HARRY HANSON, *Treas.*
**CENTRAL MASSACHUSETTS GAS
COMPANY**
By (s) ALBERT E. WESTWOOD,
Treas.

**CONNECTICUT RIVER DEVELOP-
MENT COMPANY**

By (s) GEORGE R. ALLEN,
Pres.

**GRANITE STATE ELECTRIC
COMPANY**

By (s) JOSEPH X. CORBETT,
Secretary

LAWRENCE GAS COMPANY
By (s) HARRY HANSON, *Treas.*

**LYNN GAS AND ELECTRIC
COMPANY**

By (s) H. E. AYER, *Vice-Pres.*

**MERRIMACK-ESSEX ELECTRIC
COMPANY**

By (s) HARRY HANSON, *Treas.*

THE MYSTIC POWER COMPANY
By (s) RALPH E. NOCK,
Vice-Pres.

MYSTIC VALLEY GAS COMPANY
By (s) HARRY HANSON, *Treas.*

THE NARRAGANSETT COMPANY
By (s) T. DEXTER CLARKE
Counsel

**THE NARRAGANSETT ELECTRIC
LIGHTING COMPANY**
By (s) T. DEXTER CLARKE
Counsel

**THE NARRAGANSETT ELECTRIC
COMPANY**
By (s) RALPH E. NOCK,
Vice-Pres.

**NEW ENGLAND POWER
COMPANY**
By (s) IRWIN L. MOORE, *Pres.*

**YANKEE ATOMIC ELECTRIC
COMPANY**
By (s) WILLIAM WEBSTER,
Pres.

**NEW ENGLAND POWER SERVICE
COMPANY**
By (s) ROBERT F. KRAUSE,
Pres.

NORTHAMPTON ELECTRIC
LIGHTING COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
NORTHAMPTON GAS LIGHT
COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
NORTHERN BERKSHIRE
ELECTRIC COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
NORTH SHORE GAS COMPANY
By (s) HARRY HANSON, *Treas.*
NORWOOD GAS COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
THE PEQUOT GAS COMPANY
By (s) RALPH E. NOCK,
Vice Pres.

QUINCY ELECTRIC COMPANY
By (s) HARRY HANSON, *Treas.*
SOUTHERN BERKSHIRE POWER
& ELECTRIC COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
SUBURBAN ELECTRIC COMPANY
By (s) HARRY HANSON, *Treas.*
WACHUSETT GAS COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
WEYMOUTH LIGHT AND POWER
COMPANY
By (s) ALBERT E. WESTWOOD,
Treas.
WORCESTER COUNTY ELECTRIC
CO.
By (s) HARRY HANSON, *Treas.*
YELLOW CAB COMPANY
By (s) T. DEXTER CLARKE,
Counsel

SCHEDULE A

CORRECTION OF NOTICE AND ORDER (References are to paragraphs of Notice and Order)

I.

Paragraph 3(a): The footnote in the bottom of the table should be changed to read as follows: "These companies were merged into Merrimack-Essex Electric Company, a company formerly named Essex County Electric Company, pursuant to an order issued by this Commission on May 23, 1957 (Holding Company Act Release No. 13480). As of August 31, 1957, 80.59% of that company's voting securities were owned by NEES."

Paragraph 3(b): At the end of line 9 add "an order of this Commission dated November 25, 1955 (Holding Company Act Release No. 13048) and". At the beginning of the last sentence for "Concurrently therewith," substitute "Concurrently with the November 25, 1955 order,".

II.

Paragraph 6(b): In the second from the last sentence the figure "1,881,215,278" should read "1,886,292,578".

Paragraph 6(c): At the end of the first sentence the figure "544,000" should read "602,600".

Paragraph 6(e): At the beginning of the ninth line the figure "75,473,813" should read "75,938,565". In the last line after the word "property" the words "in service" should be added.

Paragraph 6(i): At the end of the first sentence after "Connecticut" there should be added "and vicinity".

Paragraph 6(n): At the end of the first sentence after "Massachusetts" there should be added "and vicinity". With respect to paragraphs 6(a), 6(b), 6(c), 6(d), 6(f), 6(g), 6(i), 6(j), 6(k), 6(l), 6(m) and 6(n), the gross plant figures set forth in the Notice and Order are exclusive of Other Physical Property.

III.

Paragraph 7(a): In the second sentence, the figure "\$52,462,139" should read "\$52,928,165".

Paragraph 8(a): In the last line, the figure "\$3,159,628" should read "\$3,146,069".

Paragraph 8(b): In the second sentence for the words "more than 99%", substitute "all".

MOTION TO DISMISS

The respondents by their attorneys move to dismiss so much of the instant proceeding as relates to any of their electric properties or operations on the ground that the record in these proceedings clearly establishes that all such properties and operations constitute a single integrated

public-utility system as defined in the Public Utility Holding Company Act of 1935.

(s) JOHN R. QUARLES

(s) JAMES VORENBERG

ROPES, GRAY, BEST, COOLIDGE & RUGG
Attorneys for the Respondents

December 31, 1957

FINDINGS AND OPINION

INTEGRATION OF HOLDING COMPANY SYSTEM

Definition of Integrated Electric Utility System

Where electric utility assets operated by a registered holding company system are either physically interconnected or capable of physical interconnection so that, under normal conditions, they may be economically operated as a single interconnected and coordinated system and where, in other respects, such assets satisfy the definition of an integrated public-utility system contained in Section 2(a)(29)(A) of the Public Utility Holding Company Act of 1935, *held*, such electric utility assets constitute a single integrated public utility system.

APPEARANCES:

JOHN R. QUARLES and JAMES VORENBERG, for New England Electric System and its subsidiary companies, Respondents.

ROBERT C. BARNARD, for Abacus Fund.

WILLIAM R. NOWLIN, for the Division of Corporate Regulation.

This proceeding concerns the determination of the extent to which the electric, gas, and other business operations of the holding company system of New England Electric System ("NEES"), a registered holding company, satisfy the standards of Section 11(b)(1) of the Public Utility Holding

Company Act of 1935 ("Act"). After appropriate notice,¹ a public hearing was held. By agreement of counsel, the hearing was initially devoted exclusively to the issue as to whether or not the electric operations of the NEES system constitute those of a "single integrated public-utility system" as permitted by Section 11(b)(1).

Following the completion of the testimony in respect of that issue, NEES filed a formal motion and supporting memorandum seeking dismissal of so much of the proceeding as relates to the system's electric operations on the ground that the record establishes that all such properties and operations constitute a single integrated public-utility system.

Although there is no opposition to NEES' motion, we have examined the rather extensive record developed as to this issue. On the basis of the following findings and conclusions, we have determined to grant the motion.

PERTINENT STATUTORY PROVISIONS

Section 11(b) of the Act provides in pertinent part:

"It shall be the duty of the Commission, as soon as practicable after January 1, 1938:

"(1) To require by order, after notice and opportunity for hearing, that each registered holding company, and each subsidiary company thereof, shall take such action as the Commission shall find necessary to limit the operations of the holding-company system of which such company is a part to a single integrated public utility system . . ."

An "integrated public-utility system" is defined in Section 2(a)(29) to mean

¹ *New England Electric System, et al., Holding Company Act Release No. 13525 (August 5, 1957).*

"(A) As applied to electric utility companies, a system consisting of one or more units of generating plants and/or transmission lines and/or distribution facilities, whose utility assets, whether owned by one or more electric utility companies, are physically interconnected or capable of physical interconnection and which under normal conditions may be economically operated as a single interconnected and coordinated system confined in its operations to a single area or region, in one or more States, not so large as to impair (considering the state of the art and the area or region affected) the advantages of localized management, efficient operation, and the effectiveness of regulation."

THE NEES HOLDING COMPANY SYSTEM

NEES is a voluntary association created in 1926 in Massachusetts by Agreement and Declaration of Trust and is solely a holding company registered as such under Section 5 of the Act. It maintains its principal offices in the City of Boston, Massachusetts. It has 28 subsidiary companies, of which 12 are engaged exclusively in the electric business, 8 exclusively in the gas business, 2 in a combined electric and gas business, and 4 are inactive.

The names of the electric utility subsidiaries of NEES, the States in which they operate and the nature of their business are as follows:

| | | |
|--|-------|--------------------------|
| Attleboro Electric Company | Mass. | Electric TD |
| Granite State Electric Company | N.H. | Electric GTD |
| Lynn Gas and Electric Company | Mass. | Electric GTD, Gas PTD |
| Merrimack-Essex Electric Company | Mass. | Electric GTD |
| Mystic Power Company, The | Conn. | Electric TD |
| Narragansett Electric Company, The | R.I. | Electric GTD, Gas PTD |

| | | |
|--|---------------------|--------------|
| New England Power Company | Mass., Vt., N.H. | Electric GT |
| Northampton Electric Lighting Company | Mass. | Electric TD |
| Northern Berkshire Electric Company .. | Mass. | Electric TD |
| Quincy Electric Company | Mass. | Electric TD |
| Southern Berkshire Power & Electric Company | Mass. | Electric TD |
| Suburban Electric Company | Mass. | Electric TD |
| Weymouth Light and Power Company .. | Mass. | Electric TD |
| Worcester County Electric Company .. | Mass. | Electric GTD |

G—Generation T—Transmission D—Distribution P—Production

In addition, Yankee Atomic Electric Company ("Yankee"), 30% of the common stock of which is held by New England Power Company ("NEPCO"), was organized in 1954 for the purpose of constructing and operating an atomic nuclear power plant of approximately 134,000 Kw capacity in Western Massachusetts. The plant is scheduled for completion in 1960 and its output is to be sold to 12 New England utility companies. The acquisition by NEPCO of its interest in Yankee was effected pursuant to an order of this Commission in connection with which we found that the acquisition would, *inter alia*, tend towards the development of the integrated public utility system of NEES.² Another subsidiary of NEES, New England Power Service Company ("NEPSCO"), is a service company which provides technical services to the system's public-utility companies.

The electric utility subsidiaries of NEES conduct a retail electric business in substantial portions of Rhode Island and Massachusetts and in relatively small areas of Connecticut and New Hampshire. Altogether, these companies provide retail electric service to 810,000 customers in an area of about 4,500 square miles with a total population of about 2,300,000. In addition, they sell electricity

² *Yankee Atomic Electric Company et al.*, 36 S.E.C. 552, 564-66 (1955).

for resale to various non-affiliated utilities and municipalities in Vermont, New Hampshire, Massachusetts and in a small area in Rhode Island.

At December 31, 1956, the total electric plant investment of NEES' electric utility subsidiaries was \$547,637,969. The Kwh sales of such subsidiaries for the year 1956 were 5,434,013,000 and their electric operating revenues were \$131,615,000. The system peak load in 1956 was almost 1,200,000 Kw.

Attached hereto as Appendix A is a map of the NEES electric system.

DESCRIPTION OF ELECTRIC OPERATIONS OF THE NEES SYSTEM

For the year 1956, 76% of the electric energy requirements of the above electric utility companies(excluding Lynn Gas and Electric Company)³ was generated by system companies and the balance was purchased from non-affiliates. The system owns and operates 12 steam-electric and 22 hydro-electric generating stations. The important hydro-electric stations are located on the upper Connecticut River in New Hampshire, and on the Deerfield River in northwestern Massachusetts and adjoining area in southern Vermont. The system's hydro-electric generating stations have a capability of 553,000 Kw and are linked to its extensive transmission system by high voltage lines almost all of which are owned by NEPCO. Also connected to this transmission system are the fuel-burning generating sta-

³ Pursuant to an exchange offer authorized by us, NEES acquired 93.76% of the common stock of Lynn Gas and Electric Company in 1957. In permitting the exchange to be made we found that the acquisition of the common stock of Lynn Gas and Electric Company would tend toward the economical and efficient development of the electric properties operated by the NEES system. See *New England Electric System, Holding Company Act Release No. 13456* (April 22, 1957).

tions having an aggregate capability of 767,930 Kw, the more important plants being located at Providence, Rhode Island, and in Worcester and Salem, Massachusetts. The system's transmission facilities are also connected with those of several non-affiliates, the principal one being Boston Edison Company which serves the Boston metropolitan area and with which the system has power interchange arrangements.

In general, the steam stations in the NEES system carry the system's base load; water is stored in reservoirs during low load periods so as to have the hydro-electric capacity available to meet peak loads. Purchased power is also used to satisfy load requirements when economical. The system's electric utility assets comprising generating stations, transmission lines and distribution facilities are physically interconnected with each other over system owned and operated facilities except as discussed below.

The service area of Northampton Electric Lighting Company ("Northampton"), which operates in the west central portion of Massachusetts, is separated from the service area of its closest associate company, Worcester County Electric Company, by the service area of Western Massachusetts Electric Company ("Western Massachusetts"), a non-affiliate. At the nearest points, the service areas of the two associate companies are 5 miles apart. The peak load of Northampton in 1956 was some 14,000 Kw. The service area of Southern Berkshire Power & Electric Company ("Southern Berkshire"), which operates in southwestern Massachusetts, is also separated from the service area of its closest associate company, Northern Berkshire Electric Company, by the service area of Western Massachusetts. At the nearest points, the service areas of the two associate companies are about 7 miles apart. The peak load of Southern Berkshire in 1956 was some 8,500 Kw.

Under an agreement between NEPCO and Western

Massachusetts the latter takes from NEPCO such electricity as may be required to service the energy requirements of Northampton and Southern Berkshire and in turn delivers to Northampton and Southern Berkshire their energy requirements at the points of interconnection between them and Western Massachusetts.⁴ The deliveries of energy from NEPCO to Western Massachusetts and from the latter to Northampton and Southern Berkshire are made as nearly as possible on a simultaneous basis. The payment for the energy is made directly by Northampton and Southern Berkshire to NEPCO in the same manner and at the same rate as other system companies make payments to NEPCO for purchased energy.

The service areas of Quincy Electric Company ("Quincy") and of Weymouth Light and Power Company ("Weymouth"), which companies operate in the east central portion of Massachusetts, adjoin each other, and the facilities of these two companies are interconnected. Quincy's service area is approximately 8 miles from the nearest points of the service areas of two other associate companies, Worcester County Electric Company and Lynn Gas and Electric Company. The properties of Quincy are adjacent to the City of Boston and the properties of both Quincy and Weymouth lie at the southeasterly portion of a high voltage transmission loop circling metropolitan Boston. A number of subsidiaries of NEES, along with Boston Edison Company, feed power into this loop. Approximately two-thirds of the loop is owned by NEPCO and one-third by Boston Edison Company. The power requirements of Quincy and Weymouth are supplied by Boston Edison Company pursuant to a contract which is terminable by either party on one year's notice. The peak load for the Quincy-Weymouth area for 1956 was 68,850 Kw.

⁴ A minor portion of Southern Berkshire's power requirements is furnished by two small hydro-electric stations owned and operated by it.

The Tiverton distribution area of the Narragansett Electric Company ("Narragansett") is located in the southeastern portion of Rhode Island and its facilities are not directly connected with those of Narragansett's transmission system. Tiverton's power requirements (with a peak demand in 1956 of some 4,000 Kw) are supplied by a non-affiliate, Fall River Electric Light Company, whose facilities are, in turn, connected with those of the NEES system. In the event Fall River's capacity to supply the Tiverton load is impaired, the NEES system is in a position to make up any deficiency in the supply.

CAPABILITY OF INTERCONNECTION AND COORDINATED OPERATION

Although the facilities of the four companies described above and the Tiverton area of Narragansett are not at present directly connected with the high voltage transmission system of NEES, engineering studies and testimony regarding the feasibility and costs of making such direct interconnections were submitted by NEES. To make such interconnections would require the construction of 16 miles of 69 Kv transmission line for Northampton, 13 miles of 115 Kv and 6 miles of 23 Kv transmission lines for Southern Berkshire, 35 miles of 115 Kv and 6 miles of 23 Kv transmission lines for Quincy-Weymouth and 8 miles of 23 Kv transmission line for the Tiverton area. While the existing arrangements are merely those which, at present, make the best economic sense, the necessary interconnections would be constructed forthwith if the present arrangements with the non-affiliate companies were terminated.

The record indicates that the system's electric business is conducted on a unified basis. Construction of new generation, transmission and other facilities is planned with a view to the requirements of the system as a whole as well

as of the constituent company or companies which may be particularly affected. Daily coordination of the power supply for the system is controlled by a central system dispatcher, located at Millbury, Massachusetts, who schedules and controls, principally through automatic electronic equipment, the use of the important generating units in the system. He also arranges the daily purchases and sales with neighboring companies.

The supplying of power for the Southern Berkshire and Northampton areas, which are not directly connected with the system's high voltage transmission lines, is in important respects coordinated with that of the system as a whole since the necessity of satisfying their daily requirements is the responsibility of the NEES system dispatcher. As to the Quincy-Weymouth areas, the automatic controls in the NEES system instantly detect any power deficit arising in the transmission loop surrounding the Boston area, including the power requirements of the Quincy-Weymouth areas, and under normal conditions the NEES system is in a position to rectify automatically from its generating facilities the power deficit. Similarly, in the event the supply to the Tiverton area should be impaired, the NEES system is in a position to supply the load automatically.

Accordingly, we find that the electric utility assets in the NEES system are physically interconnected or capable of physical interconnection and may be economically operated as a coordinated system.⁵

OTHER STATUTORY STANDARDS

The electric operations of the NEES system are conducted in a comparatively small and compact area in five

⁵ Cf. *The North American Co.*, 11 S.E.C. 194, 241-243 (1942); *Cities Service Power & Light Co.*, 14 S.E.C. 28, 52-55 (1943); *Federal Light & Traction Co.*, 15 S.E.C. 675, 679-681 (1944).

contiguous States in New England. The distance between the most northerly point and the most southerly point in the system is approximately 200 miles; and the distance between the most westerly point and the most easterly point is approximately 150 miles.

Although the record indicates that most of the principal executive and technical personnel who formulate system policy and planning and control the affairs of the system have their offices at the central headquarters in Boston, it is noted that, by reason of the comparatively compact area served, the central organization has ready access to almost any part of the system and can maintain daily contact with local needs and conditions. In this connection, the local companies employ experienced local managers to deal with local problems of operation, such as day-by-day customer relationships, supervision of local employees and public relations. The manager is a member of the local company's Board of Directors and in most instances other local residents are also members of the Board.

The electric distribution properties of the NEES system are subject to the regulatory jurisdiction of the State commissions in the four States in which the system renders retail service, namely the Connecticut Public Utilities Commission, the Department of Public Utilities of Massachusetts, the Public Utilities Commission of New Hampshire, and the Public Utility Administrator, Department of Business Regulation of the State of Rhode Island. Each of these commissions has extensive regulatory jurisdiction over the operations of the respective companies located in their respective States. The retention under common control of the various electric properties does not appear to impair the effectiveness of State regulation.

CONCLUSIONS

Upon consideration of the entire record, we are of the opinion that the electric utility assets owned and operated by subsidiaries in the NEES holding company system are either physically interconnected or are capable of physical interconnection so that, under normal conditions, they may be economically operated as a single interconnected and coordinated system and in other respects meet the definition of an integrated public utility system as applied to electric utility companies set forth in Section 2(a)(29)(A) of the Act.

We shall, therefore, dismiss the proceeding insofar as it relates to the issue of whether the electric utility assets of the NEES holding company system constitute a single integrated public utility system, and shall reconvene the hearing at an appropriate time for the taking of evidence with respect to the other issues in the proceeding.

An appropriate order will issue.

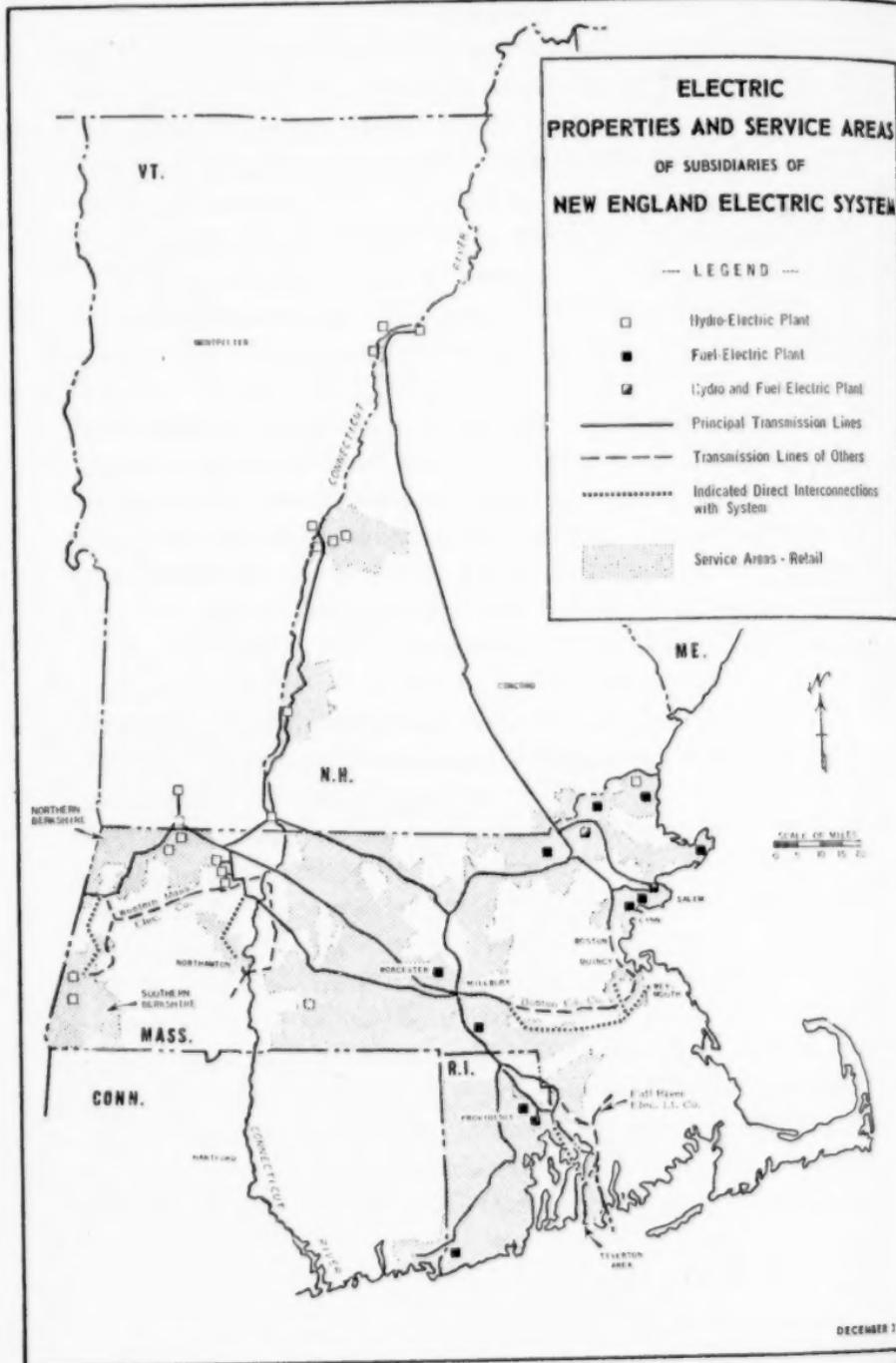
By the Commission

(Chairman GADSBY and Commissioners ORRICK,
PATTERSON, HASTINGS and SARGENT).

(s) ORVAL L. DU BOIS

Secretary

[SEAL]



ORDER DISMISSING PROCEEDING IN RESPECT OF CERTAIN ISSUES

The Commission having, on August 5, 1957, issued its Notice of and Order for Hearing pursuant to Section 11(b)(1) of the Public Utility Holding Company Act of 1935 ("Act") in respect of New England Electric System and its Subsidiary Companies, Respondents (Holding Company Act Release No. 13525), to determine what action, if any, shall be required to be taken to limit the operations of the system to a single integrated public utility system and to such additional systems and other businesses as are retainable under the provisions of Section 11(b)(1) of the Act; and

A public hearing having been held after appropriate notice, at which evidence was adduced solely with respect to the issue of whether the electric utility assets of New England Electric System and its subsidiaries constitute a single integrated public utility system; and

New England Electric System having filed a motion and supporting memorandum requesting dismissal of the proceeding insofar as it relates to said issue; and

The Commission having considered the record on said issue; and having this day issued its Findings and Opinion herein, on the basis of such Findings and Opinion:

IT IS ORDERED that the proceeding heretofore instituted by the Commission's Notice of and Order for hearing of August 5, 1957, issued pursuant to Section 11(b)(1) of the Act, in respect of New England Electric System and its Subsidiary Companies, Respondents, be, and hereby is, dismissed insofar as such proceeding relates to the issue of whether the electric utility assets embraced in the holding company system of New England Electric System constitute a single integrated public utility system.

IT IS FURTHER ORDERED that, in all other respects, said proceeding is continued in full force and effect. A further

hearing will be held herein upon the remaining issues at such time and place as may be ordered by the Commission or fixed by the hearing examiner heretofore designated.

By the Commission.

[SEAL]

(s) ORVAL L. DUBoIS

ORVAL L. DUBoIS

Secretary

ORDER RECONVENING HEARING

The Commission having, on August 5, 1957, issued its Notice of and Order for Hearing pursuant to Section 11(b)(1) of the Public Utility Holding Company Act of 1935 ("Act"), in respect of New England Electric System ("NEES") and its Subsidiary Companies (Holding Company Act Release No. 13525), for the determination of what action, if any, should be required to be taken to limit the operations of the system to a single integrated public-utility system and to such additional systems and other businesses as are retainable under the standards of Section 11(b)(1) of the Act; and

A public hearing having been held after appropriate notice, at which evidence was adduced solely with respect to the issue of whether the electric utility assets of NEES and its Subsidiaries constitute a single integrated public-utility system; and

The Commission having, on February 20, 1958, issued its Findings and Opinion (Holding Company Act Release No. 13688) concluding, among other things, that the electric utility assets owned and operated by the Subsidiaries in the NEES system met the definition of an integrated public-utility system as applied to electric utility companies set forth in Section 2(a)(29)(A) of the Act; and having issued its Order wherein it dismissed the proceeding insofar as it related to the issue of whether the electric utility assets embraced in the holding company system of

NEES constitute a single integrated public-utility system, but in all other respects continued the proceeding in full force and effect upon the remaining issues concerning which a further hearing would be held at such time and place as might be subsequently ordered by the Commission or fixed by the hearing examiner; and

It appearing to the Commission that it is appropriate and in the public interest and the interest of investors and consumers that the hearing be reconvened:

IT IS THEREFORE ORDERED that the hearing in the above entitled proceeding be reconvened on May 18, 1960 at 10:00 o'clock in the forenoon of that day, at the Headquarters Office of the Securities and Exchange Commission, 425 Second Street, N.W., Washington 25, D.C.

By the Commission.

(s) ORVAL L. DUBoIS
Secretary

NOTICE OF APPEARANCE AND ANSWER

I.

The Department of Public Utilities of The Commonwealth of Massachusetts hereby enters its appearance in this proceeding, and files this written notice of appearance pursuant to Rule XVII (a) of the Rules of Practice of the Commission.

II.

The position of the Department of Public Utilities of The Commonwealth of Massachusetts with respect to the matters set forth by the Securities and Exchange Commission in its Notice of and Order for Hearing dated August 5, 1957 is that the economies of joint operation of gas and

electric properties by the New England Electric System holding company system are substantial, that a separation of such joint operation would be adverse to the interests of the residents of this Commonwealth and may necessitate increased gas rates as a result of the apparent substantial additional expenses flowing from the separation of such joint operation and that, under the provisions of Section 11(b)(1) of the Public Utility Holding Company Act of 1935, specifically Clauses (A), (B) and (C) thereof, the gas utility companies of the New England Electric System holding company system may be retained under common control with the system's integrated electric-utility system.

THE COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

By: (s) FRANCIS X. LANG

Chairman

Dated: May 9, 1960

STENOGRAPHIC TRANSCRIPT OF HEARING

[593]

* * *
BEFORE THE
SECURITIES AND EXCHANGE COMMISSION

In the Matter of:

NEW ENGLAND ELECTRIC SYSTEM

AND

ITS SUBSIDIARY COMPANIES

File No. 59-102

(Public Utility Holding
Company Act of 1935)

Room 292

Securities and Exchange Commission
425 2nd Street

Washington, D.C.

Wednesday, May 18, 1960

The above-entitled matter came on for further hearing,
pursuant to recess, at 10:00 o'clock a.m.

Before:

JAMES G. EWELL, Hearing Examiner

*Appearances:*JOHN R. QUARLES and JAMES VORENBERG, Esqs., 50
Federal Street, Boston Massachusetts, RICHARD
B. DUNN, Esq. 441 Stuart Street, Boston, Mass.,
and WILLIAM D. ANDREWS, Esq., 50 Federal Street,
Boston, Mass., for and on behalf of the RespondentsTROY T. MURRAY, Esq., Department of Public Utilities,
Room 167, State House, Boston, Mass., for
and on behalf of the Department of Public UtilitiesWILLIAM R. NOWLIN, Esq., Counsel, Division of
Corporate Regulation, Securities and Exchange
Commission

[594]

PROCEEDINGS

Hearing Examiner Ewell: The record will show that the hearing is reconvened in the matter of New England Electric System and its subsidiary companies, under the Commission's file No. 59-102, pursuant to the Commission's order of February 8, 1960, which stated, among other things, that the proceeding involving the question of the retention of the electric utilities has already been disposed of by the Commission by its order of February 20, 1959, and that the hearing should be reconvened for the purpose of disposing of the remaining issues in the proceeding under Section 11(b) 1 of the Public Utility Holding Company Act of 1935.

The Commission's order set the matter down for this morning, May 18th, at 10:00 o'clock, and we are now ready to proceed with the taking of testimony in pursuance of that order.

First, I would like to call attention, though, to the fact that I have received a notice of appearance on behalf of the Commonwealth of Massachusetts, Department of Public Utilities, by Francis K. Lang, Chairman.

This notice of appearance is rather brief, and I think it might be appropriate to read it into the record.

First, I will ask if there is anyone here present representing the Department of Public Utilities.

[595] Mr. Murray: I am here representing the Massachusetts Department of Public Utilities. My name is Troy T. Murray, Member of the Massachusetts Bar.

Hearing Examiner Ewell: Under our rules any state or political sub-division thereof may become a party upon filing of a notice and application for that purpose.

Is there any objection? I think the motion will be granted, and as indicated, I think I will read this paragraph into the record.

The second paragraph states:

"The position of the Department of Public Utilities of the Commonwealth of Massachusetts with respect to the matter set forth by the Securities and Exchange Commission in its notice and order for hearing dated August 5, 1957 is that the economies of joint operation of gas and electric properties by the New England Electric System holding company system are substantial, that a separation of such joint operation would be adverse to the interests of the residents of this Commonwealth and may necessitate increased gas rates as a result of the apparent substantial additional expenses flowing from the separation of such joint operation, and that under the provisions of Section 11 (b) 1 of the Holding Company Act of 1935, specifically clauses (a) (b) and (c) thereof, the gas utilities of the New England Electric System holding company system may be retained under common [596] control with the system's integrated electric utility system."

This letter is signed by the Commonwealth of Massachusetts, Department of Public Utilities, as I indicated before.

The motion to intervene in the proceeding is granted, and I will ask if there is anyone else who wishes to enter an appearance in this matter.

Mr. Quarles: Mr. Hearing Officer, on behalf of the respondents, the appearances of Mr. Vorenberg and myself were entered in the earlier sessions. I would like also to have noted of record the appearance of Mr. Richard B. Dunn, attorney of Boston, and Mr. William Andrews, also an attorney of Boston, as counsel for the respondents.

Hearing Examiner Ewell: All right. Of course, Mr. Nowlin appears for the Division.

Mr. Nowlin: Mr. Examiner, before we proceed with the testimony, I would like to state for the record the Com-

mission's order reconvening the hearing in this matter was printed and published in the Federal Register February 16, 1960, in Volume 25, Number 32 at Page 1387.

Hearing Examiner Ewell: I want to ask again if there is anyone else who wishes to enter an appearance in this matter or be heard in connection with this proceeding.

The record will show no response.

So, I assume that we are ready to go forward now [597] with the taking of testimony, if there are no other appearances.

Mr. Quarles: As a preliminary to that, I would like to tie this hearing in with the preceding one, if I may.

As you may recall, in my opening statement at the commencement of these proceedings in November of 1957, I pointed out that there were certain differences between the issues concerning the retainability by NEES of its electric utility assets and its gas utility assets, respectively; that with respect to the former, the facts were relatively simple and easy to establish, whereas the latter would require a different and more comprehensive kind of treatment; and that for practical reasons, including particularly those relating to financing, it seemed desirable to separate the two and deal first with the electric assets.

This proposal was adopted and in due course, after hearings, as you have mentioned, the Commission issued its findings and opinion determining that the electric assets of the System constitute a single integrated public utility system and are retainable as such. This is the principal utility system of NEES.

[598] We come now to a consideration of the gas utility assets. As indicated at a previous hearing, in view of the position taken by the Commission in other cases, we do not press the contention that these assets may be retained as a part of our single utility system but will direct our attention to demonstrating that they are retainable as an

additional integrated system, or alternatively as more than one such additional system, by reason of complying in every respect with the so-called ABC tests of Section 11(b)(1). A determination that they are so retainable will not be inconsistent with any previous decision of the Commission or the courts with which we are familiar.

In fact, we are satisfied that such a decision is required by the express language of the statute as applied to the facts of this case.

Recognizing that it is the policy of the Commission to order segregation of electric and gas utility systems in the absence of a clear showing to the contrary, and that if we are to retain both we must prove our case by positive evidence, we may possibly have gone further than necessary to make sure of our facts, checking and rechecking our conclusions, and procuring expert professional advice of the highest standing on all questions of opinion or judgment involved in our determinations. If this should appear to be so, Mr. Hearing Officer, we ask your indulgence, and [599] assure you that we will present our evidence as expeditiously as the gravity of this case permits.

To fully appreciate the facts with respect to the gas properties in the NEES system as they are today, it is necessary to consider them in their historical context. The reorganization of the NEES system to comply with Section 11(b)(2) of the Public Utility Holding Company Act was consummated in 1947.

During the next few years the electric utility business in New England experienced an unprecedented growth, but the manufactured gas business failed to keep pace, and by about 1950-1951 had reached a very low ebb.

The coming of natural gas was imminent and full of promise, but the cost of conversion to it would be substantial. There was some uncertainty as to the retainability by the NEES System under Section 11(b)(1) of the

Act of its gas business as it was then constituted. NEES was experiencing difficulty in the equity financing of its business. In view of this total situation the NEES management decided to explore the possibility of disposing of its gas holdings, hoping that the prospect of natural gas would enable it to get a satisfactory price. It invited bids and in the fall of 1951 entered into an agreement of sale of substantially all its gas properties, conditional only on the purchasers' being able to arrange the necessary [600] senior financing.

In February of 1952, NEES was notified that the financing efforts had failed and that the contract was terminated. By that time natural gas in the area had become a reality and it was essential to go forward without delay.

In view of all the circumstances, after careful consideration NEES then decided to suspend all efforts to sell its principal gas properties and set about developing the full potential of its natural gas business. This has involved substantial changes in management and personnel, corporate structure, and property holdings, all of which will be explained in some detail by our witnesses.

Briefly summarized, a separate and independent gas division was established and given full authority to operate the gas properties independently of and in competition with the electric properties and to promote aggressively the development and extension of the gas service; the corporate organization has been substantially rearranged by successive mergers, consolidations, transfers and the like to effect complete separation of the gas properties from the electric properties and to provide a simplified and practical corporate structure appropriate to the needs of the gas utility business; and by eliminating fringe properties, the gas system has been reduced to a small compact group of companies, all situated in the State of [601] Massachusetts and all but one served by the same pipeline.

In brief, we will show that the effect of this program has been to bring the gas properties of the System, while under common ownership and operation, within the definition of a single integrated gas utility system, and in any event, whether technically one or more such systems, clearly within the requirements of the Act for common control and operation; and at the same time to develop an operating organization and program for the electric and gas properties under common ownership which is functionally an efficient and integrated system, even if technically under the Act it is necessary to regard the total enterprise as consisting of a principal electric system and one or more secondary gas systems. We also expect to show that both the electric companies and the gas companies and their customers benefit by the combination; that separation would inevitably result in substantial losses of economies to both, especially the gas companies and their customers; and that, in view of the critical competitive situation of the gas utility industry in New England by reason of distance from the gas fields and absence of natural storage facilities, the loss of economies that would result from such a separation would seriously threaten the future of these gas companies.

Looking now at the specific provisions of the Statute, it appears that there is only one substantive [602] issue remaining in this case. The electric properties have been cleared, and I assume there is no question about the service company. This leaves merely the question of compliance of the gas properties with the provisions of Clauses (A), (B) and (C) of Section 11(b)(1) of the Act.

Since all of the properties are in a single state, the requirement of Clause (B) is met.

In view of the small size of the total system and particularly of the gas system, it does not seem that any serious question could be raised under Clause (C); and if there is

any theoretical doubt, it appears to be resolved by the facts of actual experience, the details with respect to which will be presented in the course of this hearing.

Finally, we have the question under Clause (A) whether the several gas companies could be operated independently without the loss of substantial economies now available to them; and it is to this that we have principally addressed our attention.

Even though by virtue of their present common ownership and joint operation the several gas companies may be regarded as a single integrated utility system, it appears that, in segregation studies and in applying the ABC tests, they must be examined individually and on the assumption that if separated from the NEES system each of them would be operated independently. If they were to be [603] disposed of, it would be in whatever manner proved feasible at the time, and there is no basis for assuming that they would be kept together under new ownership. We have accordingly made our studies of them separately. But, by way of exploring all possible alternatives, although we may not have the right to assume the possibility of joint operation after severance, we have also examined the extent to which the economies lost in separation could be salvaged and retained if in any way a plan could be found to operate all of the gas properties as a single independent system.

Briefly stated, the position of the respondents in this proceeding is as follows:

One, the corporate structure and administrative organization of NEES as developed under the Holding Company Act and now in effect are appropriate to the situation of the System and provide the framework for efficient operation of all its utility properties and for good service to the public. This has been amply demonstrated in actual practice.

Two, the present clean-cut separation of gas and electric management in independent departments facilitates aggressive promotion and development of each without prejudice or favor to either. In view of all the circumstances, the record of the gas companies in the NEES Gas Division compares favorably with the other gas companies throughout New England.

[604] Three, the unique competitive handicap of the gas industry in New England by reason of being further from the source of supply of natural gas and having no natural storage facilities for peak shaving and therefore having higher costs for gas than any other area in the United States, while the prices of competing fuels are as low here as anywhere in the country, necessitates availing of every possible advantage and makes the loss of any economy critically serious.

Four, separation of the gas companies from the NEES system would inevitably result in substantial losses of economies which they now enjoy and without which their future would be less secure, even if a way could be found to keep them together and operate them jointly as a single gas utility system.

Five, separation would also result in substantial losses to the related electric companies, which is particularly significant in this case as such losses would ultimately fall principally on the same customers as the gas company losses since, in large measure, the gas and electric customers are the same individuals.

Six, having gas and electric properties under common ownership and control is not in any way contrary to the public policy of Massachusetts and does not in any way interfere with but actually facilitates regulation by state [605] authority.

Seven, continued ownership and control of its present gas properties by NEES is entirely consistent with the

broad purpose and policy as well as the specific provisions of the Holding Company Act.

Eight, in sum, this case is unique and differs in substantial ways from any that has previously come before the Commission, and on the facts, as they will be brought out in the evidence, the Holding Company Act requires a finding that the gas companies now in the NEES system may be retained by it.

Although the relevant facts appear to be quite simple, determining with the maximum degree of certainty and accuracy the amount of the loss of economies that would result from separation has required long and tedious work and the application, at various points, of experience and mature judgment. This work has been done by NEES personnel with the aid of its regular professional advisors and by Ebasco Services Incorporated, an independent engineering and consulting organization. The two groups have worked in collaboration in some areas and along parallel lines in other areas, each exercising independent judgment on all matters of opinion or judgment. Senior members of the NEES organization and of Ebasco, as well as staff and operating personnel who did the field work and assembled the [606] statistics, are here for direct testimony and cross examination.

In the interest of presenting the subject matter in logical sequence and producing as clear a record as possible, we would like the privilege, as in previous hearings, of having certain witnesses testify in installments as different aspects of the case are developed, instead of being required to complete their testimony and be cross examined before being excused from the stand; and of course we will be happy to have counsel for the staff defer cross examination until all of our evidence is in and the staff has had an opportunity to examine the transcript.

Also, following the previous practice, if agreeable to Mr.

Nowlin, I suggest that we wait until the evidence is in before we discuss post-hearing procedures, such as staff participation in the preparation of the decision, the need for any specific findings or a recommended decision by the hearing officer, the thirty-day waiting period, briefing, oral argument, etc., and that in the meantime all rights in these respects be reserved.

I think it is implicit in what I have already said that the respondents are taking this case seriously and regard it as different from any case previously before the Commission. With respect to one or more of these procedural matters, therefore, when the time comes, we [607] may well ask for a different procedure from that followed in the electric case.

We plan to present our case in the following order.

Mr. William Webster, President of NEES and NEPSCO will present a brief and general picture of the NEES System as it exists today, with emphasis on the gas side.

Mr. Robert S. Quig, Coordinator of the Management Consulting Division of Ebaseo Services, Incorporated, will outline the assignment given to Ebaseo and the manner in which it was carried out by Ebaseo personnel under his supervision, and will present the report submitted by Ebaseo.

Mr. Harold Dalbeck, head of the Gas Division of NEES and President of the several gas companies, will describe the gas division, its history, organization, management, properties and operation, and will describe the effect of severance on the gas companies.

Mr. Leigh FitzGerald, a Vice President of New England Power Service Company, will similarly describe that portion of the NEES electric utility system which is directly related to the gas system by reason of serving common customers, using common facilities or personnel, or otherwise concerned with the gas business at the operating level,

and will describe the effect on the electric companies of the gas companies' being removed from the [608] System.

Mr. Robert F. Krause, a Vice President of NEES and NEPSCO, will describe changes in the System since the hearing in 1957, and will explain the relationships between the gas and electric divisions at the executive level and the manner in which each operates independently of and in competition with the other. He will also supplement his testimony given in 1957 on the Service Company, with emphasis on the effect which gas severance would have.

Mr. Harry Hanson, Vice President and Treasurer of NEES and NEPSCO and Treasurer of most of the operating companies, will describe the Treasury Department under his Supervision and the manner in which it functions with respect to both the electric and the gas companies. His testimony will be supplemented by Mr. Elmer Lother, Vice President and Comptroller of NEPSCO. They will, among other things, present financial statements and exhibits and will describe the effects which severance of the gas companies would have in the treasury and accounting end.

We will then call several members of the Ebasco organization who participated in making the study and preparing the report and ask them to explain how the work was done, what standards and tests were applied, how firm the conclusions are and in general the soundness and reliability of the conclusions reached in the report.

[609] Members of the Ebaseo group and Mr. Dalbeck will then be asked to analyze the extent to which the losses on segregation would result from separating the gas operations from the electric operations and the NEES system, and the extent to which they would result from separating the gas companies from each other, in other words, to what extent these losses could be avoided by keeping all of the gas companies together and operating them under common ownership and control.

Finally, Mr. Webster will be recalled and questioned concerning his expert opinion on the conclusions expressed by other witnesses, on the application of the ABC tests to the facts of this case, on the materiality of the risks to the gas companies in segregation and on the net effect of this segregation.

Hearing Examiner Ewell: Mr. Quarles, in regard to your statement that you intend to present some of the testimony of certain witnesses, perhaps in segments, as need might arise, I assume, though, that it will be all concluded, each witness's testimony will be concluded in your direct case.

Mr. Quarles: Yes, in the direct case, before we suggest an adjournment for the study of the record. That is correct. Our thought is merely that it would be a more readable record and a clearer record if we deal first with [610] the study on the assumption of separate operation of the individual gas companies and then deal with it on the other assumption of a possible way of continuing operation of the gas companies as an independent system.

Hearing Examiner Ewell: All right. Are you ready to go ahead?

Mr. Quarles: I would like first to call Mr. Webster.

Mr. Nowlin: If you don't mind, just a minute. I assume the answer is pretty obvious, that in the event it should be determined that the gas properties are not retainable, together with electric properties, that the management of NEES would select the electric properties in lieu of the gas properties.

Mr. Quarles: That selection has been made. I think it was in the record before, in my opening statement. I did express the idea that the electric system is the principal system.

Mr. Nowlin: Thank you, sir.

Mr. Quarles: Now, may I recall Mr. Webster who has

already been sworn and testified in the earlier phase of the case.

Hearing Examiner Ewell: All right.

[611] Whereupon,

WILLIAM WEBSTER

having been previously sworn, resumed the stand and testified further as follows:

Direct Examination

By Mr. Quarles:

Q. Mr. Webster, when you testified in November 1957 in the earlier hearings with respect to these proceedings, I believe you said that you were Executive Vice President and a Director of NEES, President and a Director of Narragansett Electric Company, President and a Director of Yankee Atomic Electric Company and a director of New England Power Company. Since that time have there been any changes in your positions with the NEES holding company system? A. Yes. Effective February 25, 1959, I resigned as Executive Vice President of NEES and was elected President. On December 22, 1959, I resigned as President of Narragansett Electric Company but remained on the board of that company. Effective January 4, 1960, I was elected President and a Director of New England Power Service Company. In addition to these positions I have continued as President and a Director of Yankee and as a Director of New England Power Company.

Q. In previous hearings in this case, respondent's exhibit No. 2 listed the subsidiaries of NEES and showed [612] the percentage of NEES ownership of each subsidiary. Have there been significant changes since that time? A. Yes, there have been.

Q. I show you a tabulation entitled "Subsidiaries of New England Electric System at April 1, 1960" and ask you to

describe it. A. This lists the subsidiaries of NEES and shows the percentage of the common stock of each owned directly by NEES as of the date indicated. NEES has the controlling interest, in most cases one hundred percent of twenty-three subsidiaries. Fourteen of these subsidiaries are engaged solely in the electric business, eight solely in the gas business and one is a service company. As noted at the bottom of this table, New England Power Company, one of the NEES electric subsidiaries, owns thirty percent of the common stock of Yankee Atomic Electric Company.

Q. Was this table prepared under your supervision?
A. Yes, it was.

Q. And does it accurately set forth the information it purports to show? A. It does.

Mr. Quarles: I will offer that as Respondent's Exhibit No. 50. That is the next number.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Respondent's Exhibit No. 50 [613] will be received.

(Respondent's Exhibit No. 50 marked for identification and received in evidence.)

By Mr. Quarles:

Q. Please describe briefly the significant changes which have taken place in these corporate relationships since Exhibit No. 2 was submitted in the previous hearings in this case. A. In the first place, as a result of hearings before this Commission, a plan for the exchange of NEES shares for the publicly held minority interests in common shares in the straight electric subsidiaries of NEES was approved. The Findings and Opinion and Order were dated May 14, 1959. This was enforced by an order of the United States District Court in June 1959 and was consummated in July 1959. This involved Merrimack-Essex, Southern Berkshire, Suburban Electric, Weymouth and Worcester County and the common stock of these electric companies

is now owned one hundred percent by NEES. The then Lynn Gas and Electric Company was not involved in the minority interest proceeding as it was at that time a recent acquisition and was a combination company.

Early in 1959, the Pequot Gas Company, located in the southeast corner of Connecticut was sold and at the same [614] time Narragansett Electric Company sold its gas properties located in Westerly, Rhode Island. Later in December 1959, Narragansett disposed of its remaining gas properties in Warren and Bristol, Rhode Island and thus became a straight electric company.

On February 5, 1960, pursuant to approval by this Commission and by the Massachusetts Department of Public Utilities, the electric and gas properties of Lynn Gas and Electric Company were separated. Lynn Gas and Electric Company changed its name to Lynn Electric Company and continues to own and operate the electric properties and Lynn Gas Company, a new company, owns and operates the gas properties.

The four inactive subsidiaries which were referred to in the previous hearings, Connecticut River Development Company, the Narragansett Company, The Narragansett Electric Lighting Company and Yellow Cab Company, have all been dissolved.

Q. The properties, service areas and operations of the electric subsidiaries of the NEES were described in this proceeding in 1957. Have there been any significant changes since that time? A. Not in substance. The service areas of the electric companies are substantially the same but the vital statistics of plant investment, number of customers [615] and revenues have increased as the demand for electric service has continued its upward trend. The next important System developments in the electric end of our business will be an additional strong transmission

tie to the west which will further connect the Niagara Mohawk Power Corporation with our system, and a new steam generating station at Brayton Point on Mount Hope Bay near Fall River, Massachusetts. The 230,000 volt transmission line to Niagara Mohawk will enable us to buy 230,000 kilowatts of power from Niagara in 1962 and lesser amounts for the next two years. This arrangement will allow us to build in one single operation the 450,000 kilowatt plant at Brayton Point in two units to come on the line in 1963 and 1964. These generating units can be then immediately fully loaded with the help of some temporary one-unit sales to other New England utilities. The atomic electric generating plant of Yankee Atomic Electric Company is rapidly nearing completion. It is expected to go critical later this year and to be operating on a regular schedule sometime in 1961.

From the standpoint of electric operations as well as gas we have made rapid strides in streamlining our management and operating procedures. It has been and continues to be our objective to manage our electric system as if it were a single company, with lines of authority and responsibility so far as possible running along functional [616] lines, consistent with state laws and corporate boundaries and requirements. This has been an evolutionary process which, while not yet wholly complete, has continued to move ahead in recent years through the elimination of some corporate entities and the grouping of remaining ones on a regional basis. The recent authorization dated December 30, 1959, by this Commission with respect to the organization and conduct of business of New England Power Service Company is expected to enable us to achieve greater efficiencies and to further improve our functional organization.

Q. I next show you a map entitled "New England Electric System—Gas Companies" and ask you to state what it

shows. A. This map shows the location and service areas of the eight gas companies of the NEES system and also shows the two natural gas pipelines which serve New England. These eight System gas companies are all located in Massachusetts and, with the exception of the Norwood Gas Company, all purchase natural gas from the Tennessee Gas Transmission Company. Norwood purchases natural gas from Algonquin Gas Transmission Company.

Q. Was this map prepared under your supervision?
A. Yes, it was.

Q. And does it accurately set forth the information it purports to show? [617] A. It does.

Mr. Quarles: I will offer it as Respondent's Exhibit No. 51.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit No. 51 marked for identification and received in evidence.)

By Mr. Quarles:

Q. Referring to this map, will you indicate the general location of each System gas company and state the number of customers served by each? A. Incidentally, throughout my testimony if I may, I will use round figures. More precise figures are available in the exhibits and elsewhere in the record.

In the upper righthand corner of the map is the North Shore Gas Company which has 33,000 customers. It serves two areas, the Salem-Beverly area and the Gloucester area. The headquarters of this company is in Salem.

Closer to Boston, with its headquarters at Lynn, and serving 41,000 customers is the Lynn Gas Company. Just north of Boston is the largest of our gas companies, the Mystic Valley Gas Company. It has 99,000 customers and has its headquarters in Malden. North of the Mystic Valley service area is the Lawrence Gas Company, which serves

[618] 33,000 customers and which has its headquarters at Lawrence.

Southwest of Boston and serving 4600 customers in the town of Norwood is the Norwood Gas Company. This is the smallest of the System gas companies.

Turning to the west, in the north central part of Massachusetts is the Wachusett Gas Company with its headquarters in Leominster and serving 8,000 customers.

South and west of the Wachusett territory is the Central Massachusetts Gas Company. This company serves two divisions, the Webster and Southbridge Division and the Spencer Division. This company serves 9700 customers and has its headquarters at Webster.

Farther to the west is the Northampton Gas Light Company which has 8,000 customers and which has its headquarters at Northampton.

Q. Now, will you describe in rather broad terms the areas served by these eight companies, having in mind that a subsequent witness will be asked to describe each company in detail? A. These gas companies are, as I have said before, all located in one state, Massachusetts. They serve an aggregate of 237,000 customers located in an area of about 660 square miles with a total population of about 1,032,000 people. Over eighty-five percent of all of our gas customers are located within a 25-mile radius of Malden, [619] Massachusetts, which is the headquarters for all System gas operations. And Malden is just seven miles from the Boston headquarters of the NEES holding company system.

The distance from Northampton to the west and Gloucester to the east is just over 100 miles and from Lawrence to the north and Webster to the south is about 65 miles.

The territories served vary quite widely as between companies in industrial and residential characteristics. Heavy industry is quite generally confined to parts of the terri-

tories of the Mystic Valley Gas Company, the Lynn Gas Company and the Lawrence Gas Company. All of our gas company territories are liberally sprinkled with diversified light industries, which is quite typical, generally, of Massachusetts industry.

Heavy population densities are mainly in the cities of Malden, Medford, Everett and Revere in the Mystic Valley territory, the city of Lynn and the City of Lawrence. The other areas are characterized by moderate to small sized cities and towns. Lynn, with a population of about 99,000 is the largest city served by any System gas company, and is followed by Lawrence with a population of about 76,000. Medford and Malden in the Mystic Valley territory with 65,000 and 59,000 respectively, are the only other cities with a population of over 50,000.

[620] Q. Will you now in general terms compare the gas franchise area of NEES subsidiaries with the retail electric franchise area of NEES subsidiaries? A. As I have said, the eight gas subsidiaries of NEES provide direct gas service to a total of about 237,000 customers in an area in Massachusetts of 660 square miles with a population of approximately 1,032,000 people.

NEES electric subsidiaries provide direct electric service to a total of about 824,000 customers in a retail franchise area of about 4,600 square miles with a population of over 2,300,000 people. These retail electric operations are carried on in four states, New Hampshire, Massachusetts, Rhode Island and a small part of Connecticut.

Comparing the gas operations with electric, it can be seen that the number of gas customers is about 29 percent of the electric customers. The retail gas franchise area of 660 square miles is about 14 percent of the retail electric service area.

Q. Now, I show you a map with the title "New England Electric System Subsidiaries—Electric and Gas Service

Areas in Massachusetts" and ask you to state very briefly what it shows. A. This map shows the gas retail service areas as well as the electric retail service areas of NEES subsidiaries in the state of Massachusetts. The gas service areas are dark [621] shaded, the electric service areas are shown in vertical cross hatching and the areas where NEES subsidiaries supply both gas and electric service are both shaded and cross hatched.

Q. Was this map prepared under your supervision? A. It was.

Q. And does it accurately set forth the information it purports to show? A. It does.

Mr. Quarles: I will offer it as Respondent's Exhibit No. 52.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit 52 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Now, will you develop more fully for us the information shown by this map and describe its significance. A. First this map shows the extent of the area of "overlap", that is to say, the areas where NEES subsidiaries serve both gas and electric customers. Of the total gas franchise area of 660 square miles, about 494 square miles or 75 percent is also electric franchise area of NEES subsidiaries. The only gas company whose franchise area [622] is not served in any part by an affiliated electric company is the Norwood Gas Company whose electric competition is furnished by a municipally owned electric plant. All of the service areas of Central Massachusetts Gas Company and Lawrence Gas Company are supplied with electricity by System electric subsidiaries. The service areas of the five remaining gas companies, North Shore, Lynn, Mystic Valley, Wachusett and Northampton are sub-

stantially coextensive with those of System electric companies.

Of the total number of gas customers, about 184,000 or over 77 percent are in areas which are supplied with electric service by NEES electric subsidiaries.

This map also shows the relative size of the electric and gas service areas of NEES subsidiaries in Massachusetts. The state of Massachusetts is a relatively small state with an area of only 7,867 square miles. NEES retail electric companies serve about 3300 square miles in Massachusetts which is about 42 percent of the area of the state. The NEES retail gas service area of 660 square miles is only slightly over 8 percent of the area of the state.

Q. What particular significance do you attach to this "overlap" of service areas? A. I understand that later testimony will fully develop and explain the increased operating costs which will occur if the gas properties are assumed to be severed [623] from the New England Electric System. The great bulk of these increased costs will result from the discontinuance of joint operations at the local level in certain functions involved in furnishing gas and electric service. These joint operations would include service orders, meter reading, billing, credit and collections, general accounting and the common use of such physical facilities as offices, garages, etc., all of which are non-competitive. Not only would the operating costs of the gas companies be substantially higher if severed from the System but the retail electric companies, particularly those involved in the joint operations which I have mentioned, would also bear the burden of increases in operating expenses.

Any increased costs of providing electric and gas service must ultimately be borne by the customers using such services. It is upon those combination customers located in the so-called "overlap areas" that the burden of in-

creased costs will fall most heavily. They are both gas and electric customers of NEES companies and will receive the double impact of increased electric service costs and increased gas service costs if the gas companies are separated from the System. As I have said, over 77 percent of all System gas customers or about 184,000 people fall into this category.

Q. Will you now in general terms compare the gas business and properties of NEES with the electric business [624] and properties? A. At the end of 1959 our gross investment in electric plant and equipment amounted in round figures to \$619,000,000. Gas plant and equipment amounted to about \$60,000,000.

Gross revenues for the year 1959 were \$146,000,000 from electric sales and \$25,000,000 from gas sales. \$885,000 was derived from miscellaneous sources mostly incidental to the electric business.

As I have mentioned previously, at the end of 1959, System subsidiaries provided direct electric service to 824,000 customers and gas service to 237,000 customers.

As is clearly demonstrated by these figures, our electric System which the SEC has already found to be integrated, is our principal System.

Q. During the 1957 hearings on the electric aspects of this case, Mr. Moore outlined the history and the growth of the System electric business and properties. Will you now tell us briefly about the development of the gas business? A. NEES first obtained control of some gas business late in 1926 when a controlling interest in Lawrence Gas and Electric Company was acquired. In 1927 gas properties in Rhode Island and Connecticut were acquired through control of the Rhode Island Public Service Company. All of our gas properties other than those of the Lynn Gas Company were acquired before the end of 1931. The Lynn properties were [625] acquired in 1957.

Q. Were the gas properties acquired along with the electric properties? A. Yes. It was quite common in New England for gas and electric properties to be operated as combination corporations or, if separate corporations, to be under common ownership. Thus when, what is now NEES acquired control of several sub-holding companies such as Massachusetts Utilities Associates, Massachusetts Lighting Companies, North Boston Lighting Properties and others, gas properties, as well as electric, came into the System. At one time NEES controlled gas properties in four states; Massachusetts, Rhode Island, Connecticut and Vermont, but has since disposed of all those outside Massachusetts.

In Massachusetts we have in the past disposed of relatively minor gas operations in and around North Adams, in Athol, Gardner, Newburyport and in Blackstone. At one time there were a total of twenty-five active gas companies, either straight gas or combination, in the System and by reason of the disposals which I have mentioned and because of corporate mergers and consolidations, there are now only eight System gas companies and all are located in Massachusetts.

Q. Was there any specific plan or policy behind these various disposals, mergers and consolidations of the gas companies? [626] A. Yes. Our acquisitions of gas and electric companies were usually by groups of companies. Consequently we ended up with some properties, including some of the outlying gas properties, which did not lend themselves to system operation as well as others. Over the years we have sold off properties which did not fit into our system picture and have merged and consolidated others to facilitate their development.

We have, through the Gas Division within our NEES system, achieved an efficient and economic modus operandi for our remaining eight gas companies. Our gas properties

are now generally confined to the eastern half of one state, top corporate officers are generally common to all, and one system divisional organization serves all the gas companies. There are joint operations with the electric business where combination produces economies, and gas operations are separate from electric operations where separation makes for the furtherance of business.

Q. When were the first serious discussions indicating that natural gas might be brought into the New England area?
A. In 1948.

Q. Was that a significant event in the history of gas business in New England? A. Indeed it was. Just prior to the introduction of natural gas into New England, the gas industry generally was in dire straits. The rapid inflation which followed [627] World War II had skyrocketed labor and fuel costs so that the costs of producing manufactured gas reached extremely high levels. Most gas properties in the area were earning little or nothing and some were operating "in the red". Rate increases provided temporary relief but with each increase, it was generally true that the gas business was slowly but surely pricing itself out of the competitive market with other fuels. System gas operations were no exception to this discouraging picture of the New England gas industry in the late forties.

Q. How were the NEES gas companies operated prior to 1948? A. We operated them substantially in the form in which they had been acquired in the early 1930's. The large number of companies which comprised the NEES system in the 1930's was a result of the historical development of the electric and gas industry in the New England area on a town-by-town basis and we were faced with many problems resulting not only from a large number of corporations but also from the several holding companies in the System.

Until the simplification of the holding company system was effected in June of 1947, System officials were concerned not only with the protracted proceedings relating thereto but also with the long Service Company proceedings in the early 1940's. During the same period there were [628] protracted proceedings before the Federal Power Commission in connection with the licensing of hydro electric developments which demanded the attention of several of our top officials.

In 1947, the corporate simplification proceedings under the Holding Company Act were completed, and System officials were able to concentrate on operations of the System.

By 1948, we were already experiencing a post-war growth in our electric business far in excess of what had been anticipated during the early 1940's. At the same time, we had come to realize that the manufactured gas business had a rather dim future and offered little prospect for a fair return on the NEES investment therein.

Q. What happened in the period 1948 to 1951? A. As I have already stated, beginning in 1948, there were serious discussions indicating that natural gas would be brought to New England. In 1949 two transmission companies filed applications with the Federal Power Commission for authority to do so. We lost no time in rolling up our sleeves and getting to work. We established a task force to negotiate with the transmission companies and to participate in the FPC certificate proceedings. We engaged the services of Ebasco Services, Inc. to make a study of the potential requirements of the NEES gas companies, the information derived therefrom to be used in the FPC proceedings. Early [629] in 1950, we threw our support to the proposal of Tennessee Gas Transmission Company for the bringing of natural gas to our area, and in November of that year, the Federal Power Commission authorized Tennessee to

supply that half of the New England area which included all of our present companies except Norwood.

Parenthetically I might add that the certificate for Algonquin, the competing transmission line, was not issued till much later, Norwood did not get natural gas till late 1953.

Meanwhile, in this 1948 to 1951 period, we were increasingly concerned with the difficulties NEES was having in providing equity capital. We had been forced to cut our dividend on the NEES common in 1948 and the gas properties were contributing little if anything to our net earnings. This had an adverse effect on the market price of the NEES shares and on the price at which NEES could issue additional shares.

In 1949 NEES had to issue shares at \$10.50 per share. Our requirements were such that we knew additional shares would have to be issued early in the 1950's. A sale of the gas properties seemed clearly indicated from an economic standpoint. With the prospects of natural gas coming to the New England area we felt that we might obtain a fair price for the gas properties in relation to our [630] investment in them.

Another factor was the uncertainty stemming from the provisions in Section 11(b)(1) under the Public Utility Holding Company Act of 1935, namely, whether the NEES System would be permitted to retain its gas properties as then constituted along with its electric properties.

Accordingly, during 1950, we considered various ways of selling the gas properties and, shortly after the Federal Power Commission in November of 1950 authorized Tennessee Gas Transmission Company to bring natural gas to this area, we actively sought purchasers for the properties.

Q. Will you tell of your attempts to sell the gas properties? A. Early in 1951 we again asked Ebaseco to study

the gas properties, this time with a view to developing a brochure for use with prospective purchasers.

In March 1951, we filed with this Commission for an exemption from the competitive bidding requirements, we agreeing to maintain competitive conditions through the invitation of proposals from interested purchasers. The attempts to sell were long and involved due to the many prospective purchasers with whom we talked and due to the complexities involved such as the gas properties in many cases being parts of joint gas and electric operations [631] within a single company.

Though we invited proposals from 32 persons or groups who had expressed interest, we received only three bids for all the gas properties and in October 1951 a contract was signed with the highest bidder, a group headed by Lehman Brothers and Bear, Stearns. This contract was conditioned on the arrangement by the purchasers of senior financing.

Q. Why was this sale not consummated? A. The purchasers were unable to arrange the senior financing and in February of 1952 we were formally advised of their inability to carry through the contract. Though hearings had been set before this Commission for February 5, 1952, they were never held.

Q. Had natural gas arrived in New England by February 1952? A. Yes. It had arrived at some of our Massachusetts properties but had not arrived at all of the eastern areas.

Q. Did the negotiations for sale and the contract for sale have any effect on the gas operations prior to and upon the arrival of natural gas? A. Yes. This period was a critical one in that natural gas was arriving, rates for the retail sale thereof were being established and policies were being set. However, during this critical period we were hamstrung. [632] We did not know whether the gas

properties would be ours, we didn't know how far purchasers would want us to go.

The prospective purchasers, even after the contract had been signed, were also hamstrung. They were not certain that the properties would become theirs and could not start the building up of their own staffs. Retail gas rates had to be set but they were not set as low as they might have been if a company knew it had the properties and were looking toward long range development. Current earnings were important to the consummation of a successful sale and financing.

Q. What was the situation when the sale to the group headed by Lehman Bros. and Bear, Stearns fell through in early 1952? A. As a result of the history which I have recounted, we suddenly found ourselves with natural gas already in New England, without promotional policies and staffs fully established and without retail rates set at promotional levels. It is no wonder that in 1952 our average Mef customer usage was below that of some of the other companies in Massachusetts.

Q. What happened when the sale of the gas properties fell through? A. We re-examined the status of the gas properties in the light of the new and radically changed circumstances. [633] It seemed to us that gas had a fair chance in the market and could be built up to pull its own weight as a part of the System. We, accordingly, decided that further attempts to sell the gas properties should be dropped and adopted a long range plan designed to fully develop and promote the natural gas business.

Q. What steps were then taken? A. On March 1, 1952, an independent gas division was established with separate management and sales promotional personnel and the job of developing the market potential of natural gas began. Gas operations were completely separated from electric

operations to the extent that it made good economic sense to do so.

In areas where substantial savings could be made by joint operations and where the competitive aspects between gas and electricity were absent, these joint operations were continued. The separation of gas and electric management was implemented by corporate separations where gas and electric service was provided by combination companies.

I should like to emphasize here under this arrangement gas management reports only to top System management and is and has been operating under instructions to develop the full potential of the gas market without regard for its effect on the electric business.

On the other hand, our electric managers are operating [634] in the same manner with respect to electricity and I am convinced that we are achieving the same degree of competition between gas and electric service that would exist if our present gas companies were independently owned.

This separation of gas and electric managements and the related separation of sales promotional activities while at the same time retaining all the advantages and savings which accrue through joint areas of operation where it makes good horse sense, seems to us to be an ideal combination and one from which the consumer derives substantial benefit. He is assured of adequate and continuing service whether he elects to purchase gas or electric service or both, at a cost which I am sure is below what he would be obliged to pay if the gas properties were severed from the System.

Furthermore, we feel that through this sensible method of operating our gas properties, we eliminate the evils that the Congress had in mind in this connection in designing Section 11(b)(1) of the Public Utility Holding Company Act, while we retain the obvious economic advantages

of joint operations where there is little or no effect on the competition between gas and electric service.

The availability of natural gas and a competent separate gas management has produced results beyond our early [635] hopes. Gross operating revenues from present System gas companies in Massachusetts were about \$11,500,000 in 1951 and increased to over \$21,000,000 in 1959 or an increase of about 83 per cent. These same companies contributed about \$2,100,000 to NEES consolidated income in 1959 compared with only about \$250,000 in 1951.

These figures do not include Lynn which did not come into the System until June 1957 and did not become part of the Gas Division until the electric gas properties of Lynn were separated early this year. This achievement compares favorably with the record of other gas companies in New England. It is particularly impressive and significant in view of the handicap under which we started when natural gas reached New England, which I have already referred to.

Q. Since 1947 what changes have occurred in the System's gas property holdings? A. Small properties at some distance from the center of our gas properties have been sold and the Lynn Gas properties have been acquired. Various combination gas and electric companies have been separated into straight gas companies and straight electric companies. There have been some mergers and consolidations of gas companies.

Q. Why was this done? A. Our purpose was to achieve a single workable group of gas properties. Though disposing of the more distant [636] properties, we acquired the Lynn gas properties adjacent to our Mystic Valley and North Shore gas properties. We also sought to attain the economies of a unified gas operation and, to the extent this was not accomplished by mergers or consolidations, it

was done by the use of a centralized gas organization in lieu of larger staffs for each of the gas companies.

Q. You have stated various reasons explaining why NEES attempted to sell its gas properties in the early 1950's. Do these reasons still exist? A. No. For one, the difficulties in financing have been overcome. The market for the common shares of New England Electric System has substantially improved. Whereas in 1949 and 1952 we were able to sell additional common shares at prices of only 10½ and 12½ respectively, the average price on the New York Stock Exchange now runs somewhere around \$20 a share and we could expect to sell additional shares for a price of approximately \$20 a share.

The market price of NEES shares in the early 1950's reflected their unseasoned character—a situation that no longer exists. Though our business continues to expand and to demand financing, we do not now have the difficulty in equity financing that we did in the early 1950's.

In another area, the gas properties are now earning a fair return and contribute their share to NEES consolidated earnings.

[637] And we have now found in actual experience that these properties can be operated efficiently and independently as a separate division of our System at substantial savings and without either the gas business or the electric business hindering the other. As you can see, considerations bearing on the sale or retention of the gas properties, as part of the New England Electric System, are now materially different from those that existed in the early 1950's.

Q. I show you now an organization chart with the title "New England Electric System—Holding Company System—Functional Organization Chart—Electric and Gas Operations—March 1960" and ask if it was prepared under your supervision? A. Yes, it was.

Q. Does it accurately set forth the information it purports to show? A. It does.

Mr. Quarles: I offer it as Respondent's Exhibit No. 53.

Mr. Nowlin: No objection.

Hearing Examiner Newell: It is received.

(Respondent's Exhibit No. 53 was marked for identification and received in evidence.)

By Mr. Quarles:

[638] Q. Will you first tell us in general how this chart differs from the one received as respondent's Exhibit #22, in the previous hearings in 1957? A. There are two major differences, the first perhaps being more obvious than the second. The first difference is that the previous exhibit which you have just referred to omitted the gas companies as a part of the System organizational pattern.

The second significant difference is the treatment which this present exhibit gives to the functions of the New England Power Service Co.

Q. Why is the Service Co. treated differently in this exhibit than in the previous one? A. Prior to January 1, 1960, the New England Power Service Co. was rendering services for all companies in the NEES holding company system under a form of organization and method of operation approved by this Commission about twenty years ago. That was before the reorganization of the holding company system in 1947 and the System had yet to prove its integration from both a corporate and geographical point of view.

The approval of the Service Co operations in 1941 was based upon an entirely different set of facts than now prevail. For instance, at that time the System had 63 subsidiaries, five of which were sub-holding companies and [639] the minority interest situation was substantial and complex. In 1941 the holding company system was in the electric, the gas, the water, the steam, the trolley, the bu;

and the taxicab businesses. Today the System engaged in only the electric and gas businesses. The corporate and business simplifications have been accompanied by major streamlining of management along functional lines.

Were it not for the problems of historical development and the need for incorporation in the states served, the NEES properties could be economically and efficiently operated as a single corporation.

As I indicated previously in my testimony, we now approximate such single company operation through our integrated holding company setup in which Boston office personnel function for the benefit of the entire System and provide for all System companies the usual services expected from top management. New England Power Service Co. serves all of the units in the System with technical, financial, construction, managerial and other services at cost and consequently at less expense than these units could secure equivalent service if each of them attempted to maintain comparable personnel of their own. However, prior to 1960, NEPSCO was not authorized to render managerial services and accordingly our streamlining along functional lines had been hampered.

[640] By 1959, we had attained sufficient experience to clearly indicate that, in order to promote the efficient and economic operation of the System as a whole, there should be changes in the organization of the Service Co. and its method of conducting business. As a result, we filed with the S.E.C. in September 1959, a request for approval of modifications in the organization and conduct of business with respect to the New England Power Service Co.

Very briefly, our proposals were as follows:

(1) Officers and directors of the Service Co. to be selected regardless of interlocking positions between the Service Co., NEES and the System operating companies. In this connection all NEES officers would hold similar positions

in the Service Co., thus making possible the elimination of duplicate management personnel within the holding company system.

(2) All officers and employees of the Service Co., who would also be officers or employees of NEES, would be paid by the Service Co. Such payments would be then charged out to associated companies, including the Holding Company, benefitting from their services in accordance with the present cost allocation formula approved by the S.E.C.

The S.E.C. by order dated December 30, 1959 (File No. 37-7) approved in substance our proposals for a trial period [641] of eighteen months. In the meantime, we are to supply the Commission with periodic reports so that the effect of the changes may be studied and appraised.

The organization chart reflects these changes in that various Service Co. departments are shown reporting to an appropriate top executive who is in most cases an officer of NEES as well as of the Service Co.

Q. Will you now briefly describe the organization chart with particular reference to the gas companies? A. Reporting to the President and the Chairman of the Board are six top level executives whose titles to a large degree are self-explanatory. Bearing in mind that this is a functional chart of all System operations and does not reflect the responsibilities of the corporate officers to their respective boards of directors, I will point out the corporate affiliations of the top executives.

The Chairman, the President, and the Vice President and Treasurer, the Vice President and General Counsel, and the Vice Presidents for Management and Public Relations, all occupy similar positions both with New England Electric System and with New England Power Service Co. The Vice President, Electric Engineering and Operations, is a Vice President of New England Power Co. as well as of the Service Co. The Vice President for System Planning, is

concerned only with the electric side of the business and is a [642] Vice President of New England Power Co.

The functional boxes on the upper part of the chart shown as reporting in to the top Vice Presidents represent, with a few exceptions, the services performed by New England Power Service Co., and taken together with all of the top executives form what we refer to as the "Central Organization" or more simply as Boston Headquarters.

The lower part of the sheet starting about on a level with "Central Region Engineer" on the extreme left, represent the field operations which include field engineering (electric), electric production and transmission, retail treasury operations (both gas and electric), retail electric management, and finally, the management of the gas operations and companies. As you can see, these field operations are organized on a regional basis and the gas and electric managements are completely separated until they report in to the Vice President for Management.

Looking at the lower right hand part of the chart, you will see how the management of the gas operations fits in to the organizational structure. The President of the gas companies, four top assistants and their staffs as well as the eight gas companies, form what is referred to as the "Gas Division". This Division is responsible for all phases of gas operations except the treasury functions as will be fully described by others. The President of [643] the gas companies reports to the various boards of directors of the companies and also reports directly to the Vice President for Management.

At this point I might emphasize that ultimate responsibility for corporate activities rests with the respective boards of directors of each of the System companies. Administrative and managerial advice is supplied by Service Company officers only upon request of the respective companies.

Q. Would you say that this chart fully and completely describes the present organization of the New England Electric System holding company system? A. Not at all. As I testified in the electric part of this case in November 1957, you have to realize that we do not have here any rigid military organization. Any chart is but a convenience, an over-simplified approximation.

I was impressed by what Mr. Clarence B. Randall, former president of Inland Steel Co., said recently about organization charts. He said, and I quote, "Warm human relationships must not be put into cold storage. Situations that are essentially fluid must not be frozen. The wise management man will remember that the organization chart is a useful scaffold with which to build a house but still know that it is not the house."

[644] I concur in these statements and they certainly apply to our organization.

The Chart, while useful from a functional point of view, simply cannot show the myriad cross currents and lines of cooperation, communication and consultation which exist and which contribute in no small way to an efficient and effective organization. While these countless lines cannot as a practical matter be shown on the chart, they will become apparent as our testimony develops.

For example, while gas and electric management is completely independent and separated until the top of the functional organization is reached there are many instances of cooperation and consultation between the two to mutual advantage. These instances would include problems in public relations, relations with municipal and local authorities, local tax and assessment problems, pooling and manpower, equipment and materials in times of emergencies or disasters, joint use of facilities for economy reasons, personnel and labor problems and many others.

A concrete case in point occurred last year when two of

the older, less efficient System steam plants were shut down permanently. Most of the employees who became available could be absorbed in electric operations elsewhere on the System. By negotiations between gas management and electric management, some of these people came over into [645] gas operations where, because of their System training and background, they quickly and capably fitted into vacancies in the gas organization.

The reverse of this situation occurred when our gas production plants were converted to a peak shaving and stand-by status when natural gas became available.

Q. Will you now describe in general terms how the Gas Division functions under the Central Organization? A. In my testimony in November 1957 on the electric portion of this case, I outlined in some detail how the various retail electric companies operate with respect to the "Central Organization". In broad terms and in many specific functional areas this description would be essentially true as to gas operations.

However, although the Gas Division has strong ties to the "Central Organization" and relies on it for the broad policy guidance expected of top management and for most of the other services which are offered through the Service Company, there are some major differences. These differences come about partly because of the basic differences in the technical and practical aspects of the production and distribution of gas and electricity and partly because of our policy of promoting unrestricted competition between gas service and electric service for the available market.

[646] Let us look at the electric side of the business for a moment. The two top vice presidents at the left of the organization chart are primarily concerned with electric operations. The Vice President, System Planning is entirely electric while the Vice President, Electric Engineering

and Operations is concerned exclusively with the electric operations except for the purchasing function which he supervises for both electric and gas operations and for minor engineering and construction services which are needed by gas management from time to time.

There are compelling reasons why electric planning, production, transmission and distribution must be conducted on an over-all system basis. The reasons were explained by Mr. Brandt in his testimony in the electric portion of this case and include the advantages of larger generating units, economic balance between steam and hydro generation, interconnections with our systems and other reasons almost equally important. These factors transcend corporate boundaries and all electric companies benefit as a result of the direction and coordination of these activities at the system level.

Comparable gas activities are coordinated at the Gas Division level. Problems involving gas purchases from pipeline companies, production of gas for peak shaving and standby purposes, storage and distribution of gas and [647] all of the engineering problems connected with these functions have many practical and economic differences from their electric counterparts and should be and are handled directly by a gas management devoting its full time and attention to them. But the Central Organization does provide the basic policy framework, the broad managerial guidance and know-how within which the Gas Division operates.

Treasury activities shown functionally on the organization chart under the Vice President and Treasurer, can be more fully explained by Mr. Hanson. It is enough for me to say that all treasury operations from the top to the bottom of the chart are essentially the same for gas operations as for electric operations. At the top, financing is

planned and carried out on a system basis for the holding company and its electric gas subsidiaries.

All of the technical services available through the Service Company in the treasury and accounting areas are equally available and equally necessary to both electric and gas subsidiaries. You will also notice that at the field level on the chart starting with the block "Central Region Treasury Representative," in all regions where there are both gas and electric companies, the treasury and accounting function is completely integrated.

The Vice President for Management is primarily concerned with retail management. The President of the gas [648] companies as well as the retail electric managers report to him. Various Service Company departments also report to him; Electric Sales Promotion, Rates, Labor and Personnel Relations, etc. Only two of these have no connection with gas operations and these are (1) Electric Sales Promotion and (2) Distribution Coordination.

Gas Sales Promotion is the responsibility of the President of the gas companies with the assistance of his Sales Promotion Manager and staff and the Service Company offers no services and has no connection with this area of gas operations.

The second function under the Vice President, Management which has no connection with gas, is a temporary arrangement during a transitional period of gradually transferring the technical responsibility for the day to day operation and maintenance of electric distribution facilities from local management to the field superintendents under the Electric Engineering and Operations Vice President.

At the extreme top right of the organization chart are the Vice President, Public Relations and the Vice President and General Counsel. They and the Service Company func-

tions under their direction are available for advice and services to both the electric and gas organizations.

Q. How are the differences between electric and gas managements [649] resolved? A. I can recall no instances of major conflicts since we established the Gas Division.

Minor differences between electric and gas managements occasionally arise at the local level and this is only an indicator of the high degree of competition that exists between the two. These differences are usually settled on a fair give and take basis and if on rare occasions a decision at the top level is necessary, it is made on the merits of the particular case.

Because we firmly believe that maximum competition is best for both the System and its customers, we require the Gas Division to justify any proposed policies and plans, estimates and expenditures on the basis of necessity, reasonableness and the economies of each situation as it applies strictly to the gas business. The electric companies are under similar ground rules as applied to the electric business.

Q. I now show you three tabulations: the first is entitled "New England Electric System and New England Power Service Co.—Officers and Directors at April 1, 1960"; the second is entitled "New England Electric System—Officers and Directors of Electric Subsidiaries at April 1, 1960"; and the third is entitled "New England Electric System—Officers and Directors of Gas Subsidiaries [650] at April 1, 1960." Were these prepared under your supervision?
A. Yes, they were.

Q. Will you briefly tell us what these tabulations show?
A. They are largely self-explanatory. The first tabulation lists all of the officers and directors of New England Electric System and the New England Power Service Co. and shows that NEES officers now hold similar positions with the Service Co.

The second tabulation shows the principal officers and all of the directors of the NEES eleterie subsidiaries. It also shows which of the directors are System employees and those which are not.

The third table shows similar information with respect to the gas subsidiaries of NEES.

Q. Do these tabulations accurately set forth the information they purpose to show? A. They do.

Mr. Quarles: I will offer them as Respondent's Exhibits numbered respectively 54, 55, and 56.

Mr. Nowlin: No objection.

Hearing Examiner Ewells: Received.

(Respondent's Exhibits Nos. 54, 55, and 56 were marked for identification and received in evidence.)

[651] Q. I next show you a tabulation entitled "Comparative Data for 25 Large Combination Gas and Electric Utilities and Systems for the year 1958 Arranged in Accordance with Their Gas Operating Revenues" and ask you to describe it. A. This shows numbers of customers, operating revenues and square miles of service area where available, for both gas and electric operations of the companies indicated. The source of the information is indicated at the bottom of the table.

Comparing the NEES system gas operation with the other companies on the tabulation it can be seen that by any one of the three criteria, NEES ranks well down on the list in size.

Of the 25 companies or systems, NEES stands 12th in number of gas customers, and 15th in gas operating revenues.

Comparing gas service areas where it is possible to do so, eight of thirteen companies reporting gas service areas have larger service areas than the NEES gas companies.

In this comparison I am using for NEES, the 661 square miles shown at the bottom of the sheet as this reflects the

sale of our Rhode Island and Connecticut gas properties which took place in 1959. It is obvious from looking at the numbers of customers and combined [651-A] service areas of the companies which do not report gas service areas separately, that there are at least five or six more companies which outrank NEES from the standpoint of size of gas service area.

I would also point out that most of these utilities listed, operate within a single state and that our next door neighbors, the New England Gas and Electric Association which operates entirely within Massachusetts, has a gas service area which is larger than that of the NEES gas companies.

Q. Was this tabulation prepared under your supervision?
A. Yes, it was.

Q. And does it accurately set forth the information it purports to show? A. It does.

Mr. Quarles: I offer it as Respondent's Exhibit No. 57.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It may be received.

(Respondent's Exhibit No. 57 was marked for identification and received in evidence.)

Mr. Nowlin: May I ask one question, Mr. Webster. This Exhibit No. 57, there are no registered holding companies [652] on that exhibit, except New England Electric System, are there?

The Witness: Not that I know of.

By Mr. Quarles:

Q. Does the gas business in New England have any important characteristics distinguishing it from the gas business in other parts of the country? A. There are some differences but I would say that the most important is the high cost of natural gas from the transmission companies.

We are at the "end of the line" in New England and our pipeline cost of natural gas is the highest of any area in the country.

Furthermore, the geologists tell us that there is little hope of finding a suitable geological formation for the underground storage of gas to improve our load factors on the pipeline companies and presently available peak shaving processes are expensive. The high cost of natural gas has an adverse effect on our competitive situation with other fuels particularly with respect to space heating.

In the area served by the NEES gas companies, #2 oil is our chief competitor for home heating. Our present rates are currently just about on a par competitively with #2 oil. As the present domestic market for increased gas sales is space heating, any further increases in costs of [653] any nature would be serious. This is not true in other sections of the country where gas has a distinct competitive advantage over other fuels for heating.

Q. Mr. Webster, Mr. Nowlin has just called my attention to the Middle South Utilities Incorporated appearing near the bottom of the tabulation, Exhibit No. 57. In order to make sure there is not a mistake in the record, is it not a registered holding company under the Act? A. Of course, it is, and I failed to see it when I answered not that I know of.

Q. Have there been increases in the cost of pipeline gas to New England gas companies since the introduction of natural gas? A. Yes, there have been several, the most recent of which became effective April 6, 1960 to all companies purchasing gas from Tennessee Gas Transmission Co.

As a result of proceedings before the Massachusetts Department of Public Utilities, we have been permitted to escalate our rates to substantially compensate for these increases but as I have said, we are up against competitive ceilings on our rates.

In addition to this increase these seven NEES companies no longer have available to them the Peak Shaving Rate

which Tennessee had offered under a temporary authorization of the Federal Power Commission. This rate was finally disapproved by the FPC so that our companies, beginning [654] with the winter of 1959-1960, have had to substitute manufactured gas for peak shaving at a greater cost than the 90 cents per MCF rate of Tennessee.

Q. What are some of the other distinguishing characteristics of the gas business in New England which might be typical of the NEES gas properties? A. First of all, the heating season is longer and more severe in New England than in most areas of the United States. This has an important bearing on the consumption of fuels for heating purposes and if gas becomes more expensive than other fuels, the total dollar effect on the consumer using gas is much greater. This certainly would limit the market for gas space heating and would tend also to limit or discourage the use of gas for other domestic purposes.

Secondly, the gas companies in New England are adding new customers at a slower rate than in most sections of the U.S. New England is a mature area and it is inevitable in a rapidly expanding country that the younger sections should grow more rapidly than an area that was settled over 300 years ago.

Also, it is true that because natural gas became available much later in New England than in most other areas, competing fuels became firmly entrenched, and consequently it is more difficult to displace them. This ties [655] back also to what I said a few moments ago with respect to the competitive price situation. With pipeline gas costing what it does and with little or no price advantage over competing fuels the problem becomes more difficult.

Q. Does all this suggest to you that the future of the gas business in New England is doomed? A. Not at all. There is definitely a major place for gas even out here at the end of the pipeline. But it will require careful manage-

ment and taking advantage of every possible economy to realize its full potential.

Q. Will you now tell us in general what extent the gas subsidiaries of NEES are subject to regulation? A. As I stated earlier, all of these companies are located in Massachusetts and thereby subject as to rates, form of accounts, security issues, mergers, relation with affiliates and many other matters to the jurisdiction of the Massachusetts Department of Public Utilities. The Department has a staff of experts on matters involving the gas as well as the electric business and has the right to initiate investigations of these companies on matters within their jurisdiction. These gas companies are not subject to the jurisdiction of the Federal Power Commission but the rates under which they purchase natural gas from the pipeline companies are so subject.

Q. Is the regulation of NEES gas companies by the [656] Massachusetts Department of Public Utilities hampered or made less effective in any way by their affiliation with the NEES system? A. Without presuming to speak for the Department, I am sure that it is just the opposite. Certainly, their being subsidiaries of registered holding company does not affect the authority or power of the Department over them. In actual administration it appears affirmatively helpful. While certain formal aspects of regulation must be conducted on a company basis as for example rate proceedings, there are many formal and informal contacts required, which involve problems that can be settled by a single letter or phone call.

For example, a question involving applications or complaints can be answered for all the companies by a call or letter to the Rate Engineer of the New England Power Service Company. Questions involving the pipeline companies or gas supply can be referred to the Gas Division offices in Malden instead of to either companies. This

latter would also be true of production, distribution or utilization problems. Questions concerning plant accounting, financing or other treasury and accounting matters can be referred to our Boston office for all companies instead of contacting each individual gas company.

Q. Turning now to another subject, have you had studies [657] made which show the loss of economies which would result if the NEES gas companies were assumed to be separated from the System? A. Yes, we have.

Q. Were these studies made by your own organization or by outside professionals? A. Both. In the spring of 1959 we engaged Ebasco Services, Inc. of 2 Rector Street, New York City, to make such studies and at the same time directed our own organization to make such studies—the two groups to work together in the gathering of material.

Q. Why did you engage the services of an outside firm for this job? A. We felt that while our own people were perfectly competent to make such a study it would be advisable also to have a completely independent judgment and to have a check made on our own conclusions. Furthermore, we were influenced in this decision by the thought that this Commission understandably might want the opinion of outside experts rather than have to rely solely on the opinion and estimates of our own System people.

Q. Why was Ebasco selected? A. Ebasco Services as a firm has had a long and varied experience in the fields of public utility management and consulting services to utilities. The firm has an excellent [658] national reputation and it is staffed with competent, well trained men with actual operating experience who are acknowledged experts in their respective areas of public utility management, engineering and operations.

Q. Will you generally describe for us the manner in which these severance studies were made? A. The basic material needed by both groups was substantially identical and so

it was developed cooperatively at the working level. Then System people and Ebasco worked along parallel lines in some areas of the studies and worked in collaboration in others as data was analyzed and ideas and estimates compared. At the same time, we agreed that System personnel and Ebasco personnel should, independently of each other, be in a position to draw conclusion and pass judgments as to the effects of severance on the basis of the studies.

Q. How did this arrangement work out? A. Extremely well. Not only was this the most practical and economical way to make a complicated study of this kind but I am sure that the methods used and the manner in which it was made insured the reliability of the estimates.

Q. Will you describe, generally, what Ebasco was asked to do? A. Ebasco Services was asked to determine the loss of economies which would occur as a result of severance of the [659] gas business from the NEES System. In making this study, Ebasco was asked to show the effect of severance not only on the gas subsidiaries but also on the electric subsidiaries and on the Service Company. They were also asked to take into consideration not only the disadvantages of severance but also to determine any advantages that might accrue to the gas business and to the electric business through separate ownership and operation.

Hearing Examiner Ewell: We will take a short recess.

(Whereupon, a short recess was taken, after which the hearing was resumed.)

By Mr. Quarles:

Q. What, in broad terms, was the scope of the Ebasco severance studies? A. The scope was to include a complete review of the existing corporate structure, organization and operations of the NEES system. Both Ebasco and we were aware that this was necessary in order to determine all of the effects of severance, both tangible and intangible. The scope, of course, included detailed analysis

of all functions and parts of the System where joint operations as between the gas and electric businesses were involved.

Q. It is obvious that certain assumptions were necessary in order to study the effects of severance. Will you tell us [660] about some of these assumptions? A. There were many minor assumptions which will be set forth in the report itself. One particular assumption I might mention was that the companies upon separation would pursue similar sales and service policies and would not unduly reduce existing high standards of service. Another assumption was that if the gas companies were to be separated from the NEES system, each would be operated as an independent and separate corporate entity.

Q. Why did you assume separate rather than joint or combined operation? A. In the first place, it seemed the most logical and reasonable course. If the gas assets of NEES were to be sold, they would be disposed of in the manner most feasible at the time and in a manner which we hope would prove to be the most advantageous for the System. We have no way of knowing at this point just how this might occur. It could happen in a variety of ways and in various combinations.

I should expect that if the stock of the gas companies were to be sold by NEES, the proceeds would be utilized by NEES for investment in common stocks of its electric subsidiaries. Therefore, it might be more advantageous for NEES to sell its investment in the gas companies over a period of time and thereby minimize the [661] effect on NEES earnings.

On the other hand, if NEES were to sell the common stocks of the gas companies to NEES shareholders through a rights offering each gas company would have over 80,000 stockholders, no one of whom would own over five percent of the stock. Under these conditions there would, in effect,

still be eight separate companies and what would happen after that is a matter of pure conjecture.

Finally, it appears to us that there may well be local people or other investors who might be more interested in one or two of our gas companies than as a package of eight.

In a word, it seemed to us that the only safe assumption, the only one on which we would be on firm ground, was that if severed the gas companies would be separately operated.

Q. Did you not explore any other possibilities? A. Yes, we did. For reasons I have already given, the basic studies were made on the assumption of separate operation but we realized, of course, that there were other assumptions which could be made. So many, in fact, that if all were analyzed in depth we could never finish the job. It then seemed to us that one alternative could well be studied in order to get some measure of the maximum range of loss of economies which might be salvaged under other conditions. We, therefore, decided to explore the extent [662] to which severance losses might be reduced, if some way could be found to operate all of the gas companies in conjunction with one another; and we had both our own organization and Ebasco extend their studies to cover that basis also.

Q. Now, Mr. Webster, can you see any useful purpose which would be served by severing the gas companies from the NEES System? A. My answer to that question is an unqualified no, whether considered from the System standpoint or viewed in the light of the public and consumer interest. As I indicated, earlier in my testimony, we have spent much thought, time and effort in developing a pattern of management which permits both our gas and electric businesses to operate independently in the competitive areas as well as in areas where there are no economies from joint operation. At the same time, we are taking

advantage of every possible economy through joint use of facilities and personnel where our experienced judgment and just plain common sense tells us that this is the thing to do. In view of all of the obvious advantages of this type of operation to the consumers and to the companies, it is clear to me that there is no valid reason for severance.

Through painstaking effort over the years, we have reached the stage in the development of our functional organization where we achieve most of the economies of integration enjoyed by a single corporation. This, it seems [663] to me, is reflected in the System functional organization chart which I explained earlier.

While the gas business and the electric business each function largely independently in certain areas, there are many, many operating problems common to both. Each benefits from affiliation with the other and this, in turn, makes for a stronger system. In my opinion, as a practical matter, all of our electric companies and all of our gas companies taken together constitute an "integrated system" in operations whether or not this is technically so under the Holding Company Act. The SEC has cleared the electric part of our business as an integrated system under the Act, and we confidently expect it will now similarly remove any remaining doubts concerning the retention of the gas part.

Q. Mr. Webster, to clear a slight ambiguity, may I ask you to refer back to Exhibit No. 51, which shows the New England Electric System Gas Companies, and look particularly at the transmission lines, starting in the lower left hand corner, crossing the Algonquin transmission line and then the Tennessee transmission line, and ending at the Connecticut River, opposite Springfield. Could you tell us which of the systems own that line? A. That line is owned by the Tennessee Gas Transmission Company.

Q. And there is, at the junction with the Algonquin [664]

a circle marked with interconnection indicating that at that point there is a possible exchange or interconnection between the two lines? A. That is right.

Mr. Quarles: Mr. Examiner, I would like, if I may to have Mr. Webster excused at this time, subject to recall when we reach a later stage in the development of our case.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: All right. I am sure there is no objection to that.

Thank you, Mr. Webster.

(Witness excused.)

[665] Mr. Quarles: As our next witness I would like to call Mr. Robert S. Quig.

Hearing Examiner Ewell: Has Mr. Quig previously testified.

Mr. Quarles: He has not.

Whereupon,

ROBERT S. QUIG

was called as a witness for and on behalf of the respondents and having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Quarles:

Q. What is your name and residence? A. My name is Robert S. Quig and I reside at 24 Dartmouth Road, West Orange, New Jersey.

Q. Would you state your business connection at the present time. A. I am Coordinator of the Management Consulting Division of Ebasco Services Incorporated, 2 Rector Street, New York (6), New York.

Q. Please describe your educational background. A. I received a Bachelor of Science degree in Civil Engineering from Iowa State College, Ames, Iowa, in 1927, and a Mas-

ter of Business Administration from Harvard University Graduate School of Business in 1930.

[666] Q. Will you state your business experience? A. From June of 1927 to June of 1928, I was employed by E. I. duPont de Nemours Company, Inc., as a Junior Production Engineer in the Old Hickory Tennessee Rayon Works. During the summer of 1929 I was employed by New Jersey Bell Telephone Company in Budget Planning work. Upon graduation from the Business School at Harvard, I was employed by the Electric Bond and Share Company, parent of my present employer, Ebasco Services Incorporated, as an assistant Rate Engineer. Progressively, I have been a Rate Research Engineer, a Consultant on Rate and Pricing matters of concern to all types of utilities, Assistant Manager, then Manager of the Rate Department of Ebasco Services Incorporated.

At present I am Coordinator-Management Consulting Division of Ebasco. My responsibilities are to direct the activities of consulting and technical personnel of the Management Consulting Division in the following areas:

- Accounting and Management Control
- Business Management and Financial Facilities
- Community and Industrial Planning
- Industrial Relations
- Sales, Marketing and Public Relations
- Valuation and Appraisal

In addition, I coordinate matters involving personnel of my own Division and personnel drawn from other Ebasco Divisions in the performance of assignments [667] necessitating the formulation of a team or a "task force" to meet the specific requirements of individual clients.

Q. Mr. Quig, has your experience in the past 30 years been mostly concerned with the operating problems of utility companies? A. Yes, it has. During these 30 years I have been extensively engaged in consultation work with

the management of many utilities in this country and abroad on matters involving rate, pricing, marketing and operating problems of manufactured and natural gas, electric, steam, water and transit companies. Included in this work has been preparation of data for formal and informal appearances before Federal, State and Municipal Regulatory organizations.

Q. Will you state some of your formal appearances? A. I have appeared before the Federal Power Commission in the matters of Panhandle Eastern Pipeline Company, Dockets 1116, et al., before the Rhode Island Department of Business Regulations for the Narragansett Electric Company, before the Oregon Public Utilities Commissioner for Northwest Natural Gas Company, before the Board of Water and Power Commissioners and City Council of the city of Los Angeles, California for the Los Angeles Department of Water and Power.

Q. In your duties have you worked closely with the electric and gas utility industries in general? A. Yes, I have. I am a member of the American Gas Association's Rate Committee; of the Edison Electric [668] Institute's Rate Research Committee; and of the Load Research Committee of the Association of Edison Illuminating Companies. I have frequently been asked to speak before various association groups, engineering societies and security analysis groups on subjects related to my field of experience.

Q. Mr. Quig, will you tell us something about Ebasco Services, Incorporated? A. Ebasco provides management consulting, engineering and construction services to public utility, industrial, financial and other enterprises.

Ebasco Services Incorporated is a wholly owned subsidiary of the Electric Bond and Share Company.

The Electric Bond and Share has been in business for over 50 years, and had assets totaling \$128 million on December 31, 1958. As many know, it was formed in 1905

by General Electric Company which had accumulated securities of many small electric utility companies obtained in payment for equipment. Some of these utilities were in difficulties mainly because of inexperience and lack of qualified technical personnel. To correct this situation and salvage some of the companies, General Electric formed a professional organization called Electric Bond and Share Company.

At the outset Bond and Share formed a group of engineering, construction, and other experts to assist in the growth and the development of utility companies in which it had investments. That group, which consisted of [669] the operating departments of the Electric Bond and Share Company, became a separate organization known as Ebasco Services Incorporated in 1935.

Over the years, Ebasco and its parent have played a vital part in the development of one of the largest systems of public utility companies in the United States with properties at the then time located in 32 of the 48 states.

Ebasco and its parent also pioneered in the natural gas field. It assisted in the formation of what is now known as the United Gas System and its subsidiaries, now one of the largest natural gas systems in the world, through the integration of more than 40 companies engaged in various phases of the natural gas business. Ebasco has been engaged in many and diverse assignments for a number of gas operating utilities and pipeline companies throughout the United States and Canada.

Until 1942, all of Ebasco's services were performed for companies associated with Electric Bond and Share Company. In that year the services were offered for the first time to industry in general. In the past 18 years Ebasco has expanded and diversified greatly with the increased needs for engineering, construction and management con-

sulting services. Its greatest growth has taken place since 1942.

Q. Will you describe generally the organization and size of Ebaseco? A. Ebaseco maintains a general office staff of approximately 1500. Included here is a pool of talent whose background and experience enable them to deal with managerial, operating, financial, engineering and construction problems of its clients. Ebaseco follows the technique of bringing to bear on any job the abilities of particular experts for such time as the assignment may require.

Ebaseco's experience has been gained through day-to-day contact with the problems of a large number of companies, varying in size and physical characteristics and located in all parts of this country, as well as in many foreign countries.

Q. Will you describe generally the background and experience of Ebaseco top officers and department heads having prime responsibility for the performance of its work? A. The President of Ebasco, Mr. Fred. C. Gardiner, has been with Ebasco or its parent system since 1917, or 43 years.

Mr. K. W. Reece, the Executive Vice President, has been with Ebaseco over 33 years.

Mr. E. P. Noppel, Vice President and General Consultant on Gas Operations, has been with Ebaseco over 35 years.

Mr. H. H. Seaff, Vice President, Management Consulting Division, has been with Ebasco over 35 years.

[670] The various Department Heads having performance responsibility for the manpower on this study made in connection with this proceeding have been associated with Ebasco fifteen years at a minimum, with some having 30 to 35 years' experience.

All of these officers and Department Heads have had

years of "on the job" experience and responsibility for the performance of personnel under their charge.

Q. Will you describe briefly the nature and scope of Ebasco's assignments including gas operating utilities?
A. In the past 15 years Ebasco has performed a variety of assignments for about 100 gas companies. These assignments have covered many areas. I will cite a few as examples: Severance studies for utilities, the Jersey Central Power and Light Company, Economic Studies on Gas Distribution matters on the properties of Louisiana Power and Light Company, Arkansas Power and Light Company, Mississippi Power and Light Company, Market Studies for companies such as Bridgeport Gas Company, Chattanooga Gas Company, Northwest Natural Gas Company (Portland, Oregon), Carolina Natural Gas Corporation; Accounting and Management control studies for companies such as the Southern Union Gas Company, the Inter-Mountain Gas Company, Bridgeport Gas Company, United Gas Corporation, Operating Division, the Providence Gas Company; Engineering and Operation studies [671] for such companies as the Central Utah Gas Company, Chattanooga Gas Company, Elizabethtown Consolidated Gas Company, Newport Gas Light Company, Greenwich Gas Company. Rate studies for companies such as Boston Gas Company, Iowa Public Service Company, Nashville Gas Company, Inland Natural Gas Limited, United Natural Gas Company, Pennsylvania Gas Company, Iroquois Gas Corporation, Buffalo-Hartford Gas Company; Insurance requirements studies for many of these companies that I have just mentioned and many others.

In addition, Ebasco has performed a wide range of services for numerous Natural Gas Pipeline companies, among others the Panhandle Eastern Pipeline Company, El Paso Natural Gas Company, Texas Eastern Transmis-

sion Corporation, West Coast Transmission Limited, Inland Natural Gas Company, Ltd., South Georgia Natural Gas Company, South Carolina Mutual Gas Company. There have been numerous other assignments covering a wide range of service for many other companies, both large and small.

Q. Mr. Quig, in what capacity did Ebasco make the study in this case? A. Entirely on an independent, professional capacity. In doing this work we have sought to bring to the problems of severance of these Gas Companies and independent and objective point of view.

Q. You have heard Mr. Webster's description of what [672] Ebasco was asked to do in connection with this proceeding. Is it an accurate description of Ebasco's understanding of the assignment? A. Yes, sir.

Q. Did Ebasco carry out this respect? A. It did, sir.

Q. What did you use as the test year for this study? A. The year 1958, the latest fiscal year for which audited figures were then available.

Q. Was 1958 a reasonably typical year? A. Yes, sir.

Q. Will you explain why? A. The country was not at war nor were there any drastic internal disorders. The economy of the country and of New England was fairly healthy without any serious wide-spread depression existing. Some population growth was continuing in most of the gas service areas and some small and medium industries continued to move in. Weatherwise, the Degree Day Deficiencies experienced on a Billing Period basis were within 2 percent of those of a normal year.

Q. How did Ebasco handle this assignment? A. Ebasco organized a "team" or "task force" comprised of individuals with practical experience in particular fields to carry out this assignment. From time to time, as the need became apparent, additional personnel were assigned to

[673] this group, and the resources of Ebasco as an organization were available and were used.

I was in general charge. Other Ebasco personnel who were principal participants in the study and the fields of operation that they covered were: James F. Simes, General Gas Consultant, who covered operations and staffing generally, and New England Power Service Company; Thomas J. Johnson, Jr., Assistant Manager of Ebasco's Accounting and Management Control Department, who studied the Treasury and Accounting areas; C. William Pearson, Senior Insurance Consultant, on Insurance requirements; and R. H. Cahal, Jr., Senior Marketing Consultant, on New Business Planning and Operations.

In addition to my general responsibility for the study as a whole, I gave special attention to the problems of competitive economics in the New England area as they relate to the problems of gas severance.

Q. Will you describe generally how the Ebasco people went about carrying out this assignment? A. It was necessary, of course, to first become familiar with the manner in which these companies were being operated before gauging the effect of severance. Therefore, each Ebaseo consultant met with those NEES and NEPSICO officials whose areas of responsibility covered the field to which the Ebasco representative was principally assigned. It was also necessary to meet with operating company [674] officers and department heads, and confer on matters relating to administration, production, operation, accounting, rates, sales and in other significant areas. Ebaseo consultants met with responsible personnel in the categories I have mentioned in each of the gas companies and the respective electric companies where joint activities were conducted. They also spent considerable time at the offices and other locations concerned with their area of responsibility. The

purpose of this was to check data supplied to us and to obtain a first-hand knowledge of operations.

Q. What type of information did Ebasco call for on the operations of the NEES companies? A. Ebasco asked for both electric and gas operations analyses of payrolls and data concerning personnel, customers, billings, work loads, equipment, buildings and such other things as service orders handled at service order centers and various similar items. We asked for detailed descriptions of each organization's operations, including organization charts, detail of insurance and employee benefit programs, labor contracts and other personnel functions including pay policies. We asked for and analyzed operating estimates, construction programs and capital programs. The listing I have given is really only by way of example. In the nature of a study like this you end up reviewing enormous quantities of materials.

[675] Q. Did Ebasco ask for any data that would permit comparisons to be made with other companies? A. Yes, we did. We asked for abstracts of the Department of Public Utilities of the Commonwealth reports of other companies so that we would have available data on executive salary levels, unit costs of operation, number of employees, customer sales and similar information.

Q. Were discussions confined to people of the NEES Systems? A. No, sir, they were not. Discussions were not confined to system personnel, but included outsiders where appropriate, such as insurance brokers and realtors. For example, Mr. Pearson, of Ebasco's Insurance Department, made a thorough study of the present insurance coverage of System companies to determine its adequacy and the reasonableness of its cost. He then determined the insurance needs of the new companies and as part of this determination he met with insurance brokers, agents

and companies to discuss these needs and to secure from them an estimate of the costs of such programs.

Of course, in all phases, we drew upon the accumulated experience of the Ebaseo organization and its personnel both to provide information as well as to test the reasonableness of tentative conclusions as we went along.

Q. You have told us in general terms how you have studied the system as now constituted. Since I expect to [676] call several witnesses who studied particular areas, I will leave to them a more detailed statement of what they did on this. Will you now tell us, again in general terms, how you approached the problems of severance?

A. In each area, we considered the effect that severance of the gas business would have on the gas companies and also the effect that much severance would have on the electric companies.

We started with the organization of a new top management team, and the determination of compensation that would have to be provided. We considered the arrangements for gas supply and the details of these contracts, the most effective policies for New Business and Merchandising, the most desirable arrangements for performing the billing, collecting, accounting and purchasing functions. We studied the provisions of the labor contracts. We looked into the space requirements of the to-be independent company and finally evaluated the effect the changes caused by severance would have on income and expenses. We considered that now management would probably call in experts on certain phases of the Company's operations to aid in organizing functions that had not previously been performed independently.

Plans were laid out for efficient operation of each company in each necessary area of operation if the company were to be severed and to be forced to operate [677] independently.

Plans were laid out for efficient operation of each company in each necessary area of operation if the company were to be severed and to be forced to operate independently. The problems with respect to the electric companies were fewer but essentially the same approach was used, keeping in mind, of course, that these companies would have the continued use of services from NEPSCO.

Q. Will you describe the relative roles of the Ebasco team and the NEES personnel in the making of this study?

A. We, Ebasco, take full responsibility for the conclusions which our studies have led us to. However, it would have been impossible to have done this work without the close cooperation of NEES personnel. As I have described, we called on NEES personnel for a great volume of detailed material over a considerable length of time. We met with them repeatedly and at length, asked questions, reviewed the material they had prepared, including their estimates as to the effects of severance, and throughout the whole period of our study tested our conclusions by discussions with them. In this sense the study represents a joint project in which we all participated.

Q. Were there differences of opinion concerning the effect of severance and the type of organization which would be required upon severance, and if so how were these [678] reconciled? A. Inevitably in a job of this scope where judgment plays such an important part, different people will start with different ideas. In the end the Ebasco report embodied Ebasco's judgment. We were, of course, vitally interested in the views and judgments of the NEES people. As a practical matter I cannot recall any significant area where, when we and the NEES people had explored the problem in depth and had done such further research and analysis as the area of disagreement required, that we did not find ourselves in general agreement on what appears in our report. The conclu-

sions which were reached represented Ebasco's own best judgment. I will leave it to the NEES witnesses to state whether they also represent theirs.

Q. How did Ebasco present the result of their study to NEES? A. Ebasco prepared a report with sections devoted to each of the eight gas companies affected by severance as well as five companion electric companies where various activities were conducted on a joint basis. Other sections deal with the NEPSCO organization, and the effect on the remaining electric companies.

Proceeding these sections of the report devoted to the separate entities of NEES is an introductory section stating the scope and purpose of the assignment, with a brief [679] description of various components of the NEES organization. As a matter of convenience, we have bound in the very front of the report a copy of Ebasco's letter of transmittal of the report to the NEES officials.

Q. Does this report represent the considered and firm judgment of Ebasco as an organization? A. Yes, sir, it does. Of course, it should be borne in mind that the report does not purport to express final opinions or ultimate conclusions. It is rather a working document in connection with detailed testimony which will be given in this proceeding. I have described generally the method for the staffing of this work and the preparation of the report.

As I have stated, experts in various relevant fields made the studies embodied in the report drawing upon their own study in this case and their background and general knowledge and experience as well as upon the Ebasco organization generally. I participated throughout the study and in the preparation of the report and have reviewed it in detail. I am familiar with the qualifications of the individuals who worked on the project and have sufficiently tested the results of so much of their work in which I did not directly participate so that I feel confident in standing

behind the report and stating our conclusions based on the work it embodies. Furthermore, as I have earlier stated, [680] we have reviewed this project with senior officers and others in our organization to further test and substantiate our conclusions.

On this basis I have no hesitation in stating that the projections set forth in this report represent the firm and considered judgment of myself and the individuals who participated in its preparation. In addition, Ebasco as a firm supports the judgments of its people who were engaged in this study.

Mr. Quarles: Mr. Hearing Officer, I propose, in due course, to offer this report as an exhibit. I would like, if I may, to have it marked for identification at this time as Respondent's Exhibit No. 58.

Hearing Examiner Ewell: I note it is in two volumes. Do you want to mark them A and B?

Mr. Quarles: It might be convenient. The two volumes are numbered consecutively, the pages of volume two continuing the numbering from volume one, but perhaps it would be convenient to have them separately labelled.

Mr. Nowlin: Will this be 58-A and 58-B?

Mr. Quarles: Yes.

Mr. Examiner, with reference to the marking of this exhibit, since it is considered one total work, even though we label it as A and B, I would hope that we can refer to it simply as Exhibit 58.

[681] Hearing Examiner Ewell: I think so.

(Respondent's Exhibit 58-A and 58-B marked for identification.)

By Mr. Quarles:

Q. Very generally, what conclusions were arrived at by Ebasco? A. It is Ebasco's considered judgment that the severance of the gas properties would result in a serious and substantial loss of economies to the affiliated companies

of the NEES system. It would be especially harmful to the individual gas companies, but it would also have an impact on the remaining electric companies.

Q. Mr. Quig, the conclusions based on the study reflected in this report are of considerable significance in this case. Since it appears that the section on each gas company and on the five "companion" electric companies are organized on a similar basis, I would like you to take us on a "guided tour" through one section of this report dealing with a gas company and one with an electric company, so that we will have a general familiarity with the report.

Since we propose to call other members of the Ebaseo team and to recall you later, I will not ask you at this time to go into detail. Which gas company would be useful to review for this purpose? A. The North Shore Gas Company which is covered on [682] pages 501 to 539 in Volume I of the Report would be a good sample.

Q. Mr. Quig, do you consider North Shore to be a fairly representative NEES gas company, organized and operated in general like the other gas companies of the New England Electric System? A. Yes, I do. It was in between the others in many respects. It did not serve the largest population; that was Mystic Valley Gas Company whose service area contained 437,133 people in the 1955 Massachusetts census. Nor did it serve the smallest population, for that was the Norwood Gas Company with 21,052 population in the same 1955 census. North Shore served a population of 146,231.

North Shore didn't have the highest saturation percentage of gas customers to population; that was Lynn Gas and Electric Company with 26 percent. It didn't have the lowest; that was Central Massachusetts Gas Company with 16 percent. North Shore had 23 percent.

North Shore's ratio of residential revenues to total

revenues wasn't the highest; that was Mystic Valley Gas Company with 85.8 percent. Nor was it the lowest; that was Central Massachusetts with 73.4 percent. North Shore's ratio was 77.8 percent.

North Shore didn't derive an unusually large percentage of its revenues from industrial sales such as [683] Central Massachusetts did with 17.3 percent, nor an unusually low percentage as did Mystic Valley with 3.4 percent. North Shore got 8.2 percent of its revenues from industrial sales.

Q. What kind of territory did North Shore Gas Company serve? A. Pretty well diversified one from an economic standpoint. The residential areas were typically suburban communities; the commercial and industrial areas contained numerous large and small companies trading in and manufacturing a wide and diversified range of products.

Q. Did any affiliated company operate in any portion of North Shore's service area? A. Yes. As Mr. Webster's map showed earlier, Merrimack-Essex Electric Company provided electric service in Salem, Beverly, Gloucester and Rockport. In the other two communities served by North Shore, Danvers and Peabody, electric service was provided by municipally-owned systems.

Q. Before proceeding with the detail of this section of the report, I think it would be helpful to have you explain how the North Shore Gas Company fitted into the NEES Organization generally. A. Mr. Quarles, I think that it would be helpful if I should first explain that as at January 1, 1959 there were seven straight gas subsidiaries of New England Electric System in Massachusetts and a combination gas and [684] electric company, namely, Lynn Gas and Electric Company. For the purpose of our study, we considered the gas department of Lynn Gas and Electric Company to be an eighth gas company.

In explaining the organizational setup of the NEES

gas companies as at January 1, 1959, I refer you to page 510 of the North Shore Gas Company Report for a typical functional chart of these eight gas companies.

As shown on this functional chart, NEES at the top is the sole or principal stockholder of the gas companies; then coming down the center of the organization chart you have the gas division, the executive head of which was the president of each of the gas companies except Lynn; then comes the vice president and manager of each local company, in this case North Shore Gas Company, and under him come the operating personnel of the company.

On the left of this functional organization chart is shown the New England Power Service Company, and on the right is shown the Northeast District Treasury Organization. The former renders services, upon request, to the gas companies, and the latter performs the local treasury and accounting functions.

Q. Mr. Quig, does this functional chart and the comparable charts in other sections of the report, reflect the corporate organization of each of the gas companies? A. No, sir. It is not intended so. This chart is a [685] schematic indication of the functional lines and does not reflect the corporate setup. The board of directors, the president, the treasurer and the clerk are not shown on this chart.

Q. Does this mean that the board of directors and the principal officers do not exercise the usual functions attributable to them? A. No, sir, not at all. The president is the chief executive officer of the company and is responsible to this board of directors. The treasurer is the key man in the financial and accounting area. In considering these functional charts, of which North Shore is a typical one, the legal and corporate responsibilities must always be kept in mind.

Q. Referring again to the typical functional chart as shown in the North Shore report, please explain the activi-

ties of each of the blocks shown thereon. Perhaps it would be best if we started with the block entitled "Gas Division." A. The Gas Division represents the executive head and the central managerial organization of the gas companies.

As already stated, the executive head of the Gas Division was the president of each of the gas companies, except for Lynn Gas and Electric Company which was an acquisition by the New England Electric System in 1957 and [686] had not been integrated fully into the NEES system by January 1, 1959. The executive head had three assistants to assist him in the various phases of management and operation of the gas companies. He also had a sales promotion manager and an engineering staff.

Q. How did the Northeastern District Treasury Organization fit into the picture? A. The Northeastern District Treasury Organization was one of the six district treasury organizations the headquarters of which were placed strategically around the NEES holding company system. These district treasury organizations handled all of the local treasury and accounting functions of the NEES subsidiaries, both gas and electric, within the area.

Q. Who performed the general treasury and financial work? A. The general treasury and financial work for the company was performed by the treasurer of the company and his staff.

Q. How did the NEPSCO fit into this picture? A. NEPSCO was a 100 percent owned subsidiary of NEES, authorized under the Public Utility Holding Company Act of 1935 to provide specialized services at cost upon request from affiliated companies.

Q. How did the New England Electric System fit into this [687] picture? A. At January 1, 1959, New England Electric System was the principal stockholder of each of the gas companies and the advice of the executive officers

of New England Electric System was available, without charge, to the gas division and the gas companies.

Q. Who was the top local executive of North Shore who devoted full time to North Shore's operations? A. The Vice President and Manager, who had direct responsibility over the activities of the Production, Distribution and Utilization Departments, as well as the Merchandising, Commercial and Industrial Sales Department.

Q. How were the services provided by the Gas Division and the District Treasury Organizations paid for? A. With certain exceptions, the services of these personnel were paid for by the companies which benefitted from their services. Thus, the members of the Gas Division, as well as the top members of some of the District Treasury Organizations were part-time employees of all of the companies for whom they performed work, and part of their salary was paid for by each company. Most of the members of the District Treasury Organizations, although they performed work for all of the companies of the geographical group, were assigned as full-time employees of one of these companies. These assignments were based upon the relative [688] work load imposed by the companies. One exception was the Treasurer and the Assistant Treasurer of each company, except Lynn, who hold the same positions with NEES. No charge was made to the operating company for these services.

Q. Did any advantages accrue to the individual operating company from these centralized management and accounting activities? A. Yes, sir, they certainly did. On the operating level, they could call on groups of experts in all phases of management and technical problems. In effect, each local management was supported by the Gas Division executives who in turn could obtain the services of the specialists in NEPSCO and the advice of NEES officers. The centralization of treasury and accounting func-

tions promoted greater efficiency, flexibility and lower unit cost.

Q. Were there for each gas company some exceptions to your general comments on where they fit into the System organization? A. None that I think would be significant for the purposes of your "guided tour."

Q. With this background in mind, will you please proceed with your explanation of the portion of the report dealing with North Shore? A. The sections of the report dealing with each individual gas company are divided into two parts. For North [689] Shore, the first part, entitled "The Company as of January 1, 1959", concerns the company as constituted on January 1, 1959 and is covered on pages 504 to 518 of Volume I of the exhibit. The second part entitled "Effect of Severance", shows what it is expected would occur if the company is severed from NEES. This covers pages 519 to 539.

Q. Will you please discuss the first part? A. As you will note from the Table of Contents in pages 502 and 503, the first section on the Company covers subsections A through H. Subsection A, entitled "History and Business" on pages 504 and 505 gives the briefest kind of summary of the Company's history and business and service area. This summary in no way indicates the depth of our study of each company, but we did not think it necessary or appropriate to go into more detail, since a full description would have required a much larger report and we understood that detailed background of this type would be provided by Company witnesses.

Q. What is shown in the tabulation at the top of Page 505? A. As I have mentioned before, a NEES electric company, Merrimack-Essex, serves part of the service area of North Shore, although the service areas of the two companies are not co-extensive. This table shows for the area of the two companies which are served out of the

same [690] customer offices; the municipalities served; the populations in the 1955 Massachusetts census; the number of customers as of December 31, 1958 of NorthShore (Gas); and Merrimack (Electric); the total customers in each municipality served from these offices; and the number of combination customers; that is, those customers who took both gas and electric service from affiliated NEES companies.

Q. What about the table at the bottom of page 505?
A. This shows how gas customers on December 31, 1958 and the gas revenues for the calendar year 1958 were distributed by classes of service. You will notice that the House Heating and Building Heating services are classified separately from Domestic and Commercial services respectively.

Q. Have you any comments on the map on page 506?
A. I think the map with its descriptive symbols is self explanatory. It does show graphically one of the great barriers to extensive growth of the NEES gas companies,—the franchise areas are surrounded by those of other gas companies so that there is little or no room for territorial expansion, although there is room for growth within the service area of the company.

Q. What about sub section B on page 507? A. Sub section B at the top of page 507 entitled "Purchased Gas" describes these contractual arrangements. North Shore purchases its natural gas from Tennessee Gas [691] Transmission Company, as do all other NEES gas companies except Norwood, which purchases from Algonquin Gas Transmission Company. Some gas is manufactured by the Company's own facilities which are described, along with facilities for the distribution of gas, on pages 507 and 508.

The Company's manufactured gas plants are only used today for peak-shaving or standby purposes. That is, gas

is manufactured to reduce the peak demand from the pipeline supplier in order to avoid year round charges for demands that may only exist for a matter of hours on a few days; or to manufacture gas when emergencies prevent the pipeline supplying the required volumes. The gas manufactured, however, has the proper constituents so that it may within limits be successfully mixed with natural gas for use by the ultimate consumer.

Q. Will you discuss the organization of the North Shore Gas Company as it was on January 1, 1959? A. Sub-section D on pages 508 running to 516 briefly describes the organization of North Shore. Pages 508 and 509 cover the form of organization of the company as well as some of the services available to it through NEES generally.

I discussed this a few moments ago in my testimony and also described the functional chart on Page 510.

Q. Are the duties of the Executive and Chief Administrative officers of North Shore defined in the report? [692] A. Yes, sir, they are, although only in brief general terms. If you will turn to page 515 and the top of page 516, you will see the duties assigned to each of the major officials of North Shore and the location at which those duties were performed.

Q. This tabulation indicates that only two of these officials, the Vice President and Manager, and the assistant manager, were full-time employees of North Shore. The others were part-time employees. How did North Shore pay its share for their compensation? A. No direct payments were made for the services of two of the top officials you mentioned. These were the Treasurer and an Assistant Treasurer. Payments made to the other officials employed part-time are shown on page 511.

Q. I see this is part of a tabulation. Will you describe it, please? A. Sheets 511 through 514 consist of a Payroll Analysis of the North Shore Gas Company. It should be

clearly understood that this is only those employees on the payroll of the Company, either full or part-time.

Q. You have already mentioned a number of the part-time employees of the Company. Would you finish that discussion, please? A. You will note there are several engineers listed as part-time employees. These are the Gas Division engineers [693] and North Shore pays compensation for time actually worked. Sub-section D-2 on page 516 mentions this. Some other part-time employees are discussed in sub-section H on page 518.

Q. Have you anything else to say about sub-section D? A. Only to point out that sub-section D-3 at the middle of page 516 shows that North Shore is unionized, and that there are mentioned there the kinds of employee benefits provided. Sub-section E entitled "Production, Distribution, Utilization and Garage" appears at the bottom of page 516. I think this section is self-explanatory.

Q. Will you please explain sub-section F entitled "Treasury and Accounting" which is on pages 517 and 518? A. Referring back to page 510, the functional chart of North Shore Gas Company, you will see that this sub-section F discusses the work done under the aegis of the Northeastern District Treasury Organization which is in the upper right hand box on the chart. As I mentioned earlier, this Organization handled most of the Treasury and Accounting functions for the affiliated companies in this geographical area. The material in this sub-section F explains briefly the arrangements for the joint performance of these functions. Certain of the part-time personnel shown on page 511 perform these functions.

Hearing Examiner Ewell: Mr. Quarles, may I interrupt? I am just wondering if we are not getting near [694] lunch time. What time would you gentleman like to reconvene? Off the record.

(Discussion held off the record.)

Hearing Examiner Ewell: We will adjourn until 2:00 o'clock for lunch.

(Whereupon, at 12:50 o'clock p.m., the hearing in the above-entitled matter was recessed until 2:00 o'clock p.m. of the same day.)

[695]

AFTERNOON SESSION

2:00 o'clock p.m.

Hearing Examineer Ewell: We will resume.

Whereupon,

ROBERT S. QUIG

resumed the stand and testified further as follows:

Direct Examination (Resumed)

By Mr. Quarles:

Q. I believe we have now reached subsection G on Sales and Merchandising, is that correct? A. Yes. This sub-section on page 518 outlines the present arrangements for Sales and Merchandising. This indicates generally the separation of the new business activities of North Shore Gas from those of its affiliate, Merrimack-Essex Electric.

Q. How about sub-section H on page 518? A. This sub-section discussed other part-time and full-time employees who are shared with other affiliated companies and handle activities such as personnel, insurance and safety.

Q. Will you please move on to Part II of the North Shore section of the report? A. Part II of the North Shore section of the report deals with the effect that severance from the NEES System will have on North Shore. The Table of Contents on pages 502 and 503 indicates the various headings under which [696] these effects are discussed. The general effect of severance on North Shore is discussed on page 519.

Q. Will you explain the chart on page 520? A. This chart shows both the structure of the projected new organization to operate North Shore's business on an independent basis as well as an indication of the particular employees who would be in the various parts of this organization.

Q. Will you tell us very generally how Ebasco decided what was the best form of organization for this Company? A. The various members of the Ebasco Team were aware from their own experience and their study and analysis of the NEES situation over the past year what functions the newly independent company would have to perform; how other similar sized companies, both in New England and in other parts of the country, were organized; and how the necessary functions had been performed at January 1, 1959.

Based upon the analysis of work loads and other materials and factors and with the benefit of the views of the NEES people who were concerned with the Company in each area, we drew together the recommendations of each of our team members, prepared a pro forma Organization Chart, discussing it at all steps along the way among ourselves and with the appropriate NEES officials.

Of course, this is only the briefest sort of summary [697]. of what we did.

Q. I understand that, but since I expect to pursue this matter further with you and other witnesses later it will suffice for the present. Is the pro forma organization of each of the eight gas companies the same? A. By no means, except in the sense that each company has an officer assigned to be responsible for all functions that have to be performed. Larger companies, such as North Shore, have more executives who subdivide more of the work to be supervised.

Smaller companies have a smaller number of executives

but each has more fields to supervise. For instance, North Shore would have had a full-time Sales Manager to handle all sales matters, whereas a smaller company, such as the Northampton Gas Light Company would have had to assign to its President direct responsibility for merchandising, sales promotion and commercial and industrial sales activities.

You will note that in each company some executive is directly charged with responsibility for each necessary function.

Q. I see that the chart on page 520 lists the personnel that would be needed to perform the various company functions. Is there an analysis of those personnel and their salaries? A. Yes, sir, there is. The Personnel Analysis Pro Forma on pages 521 through 523 covers all of these people and [698] shows the payroll amounts.

Q. Where the responsibility of a position in the Pro Forma organization has not changed, are the salary levels the same? A. Yes. This can be seen very quickly by comparing the total number of full-time personnel and payroll of the Operating Departments for the pro forma organization as shown in the middle of page 522 with that of the present company as shown on the bottom of page 512. Similarly, with the totals for New Business on pages 522 and back on page 513.

This is true even though in some cases there might be increases in responsibility although the same salary would be paid.

Q. In general, how did Ebaseo arrive at the salary and wage levels shown on pages 524 and 525? A. The first step, of course, was to ascertain in detail exactly what each job would consist of in terms of both work load and responsibility. We next examined what was being paid by other Massachusetts companies, and by other companies operating in the New England area for comparable jobs plus

our general knowledge of "going" rates for various classes of personnel in other parts of the country.

We also investigated presently effective union contracts to see what salary and wage levels were prescribed for various job classifications. The levels at which we [699] finally arrived, and which are shown on pages 521 through 523, are what Ebasco felt would have to be paid on January 1, 1959 for the classes of personnel as shown.

Q. Where changes have been made in job classification, are those salary increases indicated? A. They are, and this can be deduced by comparing the pro forma personnel analysis with the payroll analysis of the Company as presently constituted. However, I think it is simpler to refer to the individual sub-sections of Part II of the North Shore report where such changes are shown in detail.

Q. Would you explain sub-section A of Part II? A. Yes, sir. A description of the most important of the top management group and their functional responsibilities is given on page 524. The remainder of sub-section A on pages 524 through 526 shows the wage and salary levels of the Executive, Administrative and Staff personnel of the Company as it would be under independent operation and summarizes the effect of severance on North Shore.

Q. Is the total figure of wages and salaries for the Executive, Administrative and Staff personnel shown at the top of page 525, the figure used in arriving at the net effect of severance on North Shore? A. No, sir. Those were based on the levels prevailing on January 1, 1959. They were about five percent higher than [700] those prevailing during 1958 so the total of wages and salaries was readjusted downward by that amount to approximate the amount that would have been paid in the test year 1958.

You will note that the 1958 figure which occurs in the text at the middle of page 525 is the one carried over to the tabulation on the top of page 526.

This shows the net effect of severance on the executive, administrative and staff functions and how this was arrived at.

The summary tabulation at the bottom of the page shows the net effect on the income accounts of the company of severance in the Executive, Administrative and Staff areas.

Q. Do the figures in this tabulation show up in any other part of the report? A. Yes, they appear in the tabulation in the sub-section on Summary of Increased Cost on page 537 of this report.

Q. What is the next sub-section of this part of the North Shore report? A. Sub-section B entitled "Production, Distribution, Utilization and Garage" on pages 526 and 527. In general, these Departments function separately from electric activities. We have made certain small adjustments for those "fringe areas" where work is performed in conjunction [701] with Merrimack but we expect Operating Expenses to remain relatively constant.

Q. Would there be any changes in the New Business function after severance? A. Sub-section C, page 527, discusses the New Business function after severance. The present Staff is adequate and would remain intact. However, it would be necessary to assign one man as Sales Manager since the sales functions now performed by an assistant manager at Beverly and by Gas Division personnel at Malden would no longer be available. Certain other minor adjustments would also be made as are discussed in the text on those two pages.

Q. What about sub-section D? A. Sub-section D on pages 527 through 532 discusses Treasury and Accounting functions in detail. In the past, most of the supervision was furnished and many functions in this area were performed for North Shore on a joint basis, by the North-eastern District Treasury Organization. If severed, similar

type supervision and many of the functions would have to be furnished and performed on a one-company basis and a larger number of clerical employees would be required which would result in some loss of economies. Also, the NEES System personnel would no longer be available to supply overall supervision of Treasury and Accounting functions, nor could NEPSCO be called upon to furnish specialized accounting [702] services as in the past.

Formerly, substantially all of the purchasing function was performed by NEPSCO. Operating independently, this function would be performed by the Stores Group.

Q. Will you describe the tabulations showing the monetary effect that severance would have on the Treasury and Accounting functions of North Shore if the Company were to operate independently? A. There are three such tabulations in this subsection. The first, on page 529, summarizes the effect of severance on general accounting functions.

The second, on page 531, summarizes the additional costs North Shore would incur through having to perform its customer accounting activities separately.

The third, on page 532, shows the effect of severance on the performance of the Stores activities of the company.

Q. Are all of these tabulations prepared on the same basis? A. They are, sir. Take that on page 529 as an example. It shows the number of employees under various job classifications and annual payroll costs which were being paid by North Shore for these services under the columns headed actual.

Under the columns headed Pro Forma are shown the number of personnel of various job classifications and the annual payroll costs that would be necessary to perform [703] these functions on an independent basis. The difference is shown under the last two columns headed Increase.

As mentioned before, these salaries were reduced to arrive at the salary levels in effect in 1958. As these tabulations show, the greatest losses on severance would be in the customer accounting area since this is the area of most closely integrated operations.

Q. What about subsection E entitled "Intercompany Rents" on page 533 of the North Shore report? A. This shows the projected net costs to the company of space reallocations which would be necessary upon severance.

Q. How about Insurance Premium Costs? A. These are discussed in subsection F at the top of page 534. This would be one of the most important effects of severance and one that might cause very unsatisfactory results. Very simply, the whole insurance question comes down to this: a small independent gas company cannot get adequate insurance for anything like what this company is now paying as part of the NEES System. In fact, it is doubtful if it can get adequate insurance at any premium which might be considered acceptable.

The gas business, rightly or wrongly, is considered relatively hazardous by insurance underwriters and they are reluctant to write such policies due to past loss experience in the industry. Even though North Shore's Insurance Premium [704] Costs would be increased, the comprehensive coverage that was available to it through the NEES system will no longer be available to it.

Q. How about Transportation Costs? A. These will increase due to three additional vehicles being required. There will also be some loss of revenue due to some garage service that was performed on Merrimack trucks.

Q. What is this item entitled "Professional Services"? A. Subsection H on pages 534, and running over on 535, discusses the various functions that have heretofore been provided and would either no longer be so provided or for which it would be necessary to pay increased charges.

These might well be greater than we have estimated for any particular year, but we have included no charges for professional services that are only necessary occasionally.

Q. Will you proceed with your explanation of part 2 of the North Shore Report? A. Subsection 1 on pages 535 and 536 covers a number of miscellaneous minor costs which are described in this subsection. The tabulations on page 536 summarizes the effect the increases in these minor accounts would have had on the income accounts of the North Shore Gas Company if the company had been operating independently. Only reasonably predictable costs have been included.

Q. Have you covered the classifications of increased [705] costs resulting from severance? A. Yes, sir, we have. Subsection J on page 537 summarizes on one page all of the increased costs caused by severance. The Income Accounts of the company that would be affected by severance are shown across the top of the tabulation. These are, Other Operating Revenues, Operating Expenses, Payroll Taxes, Non-Operating Income and Depreciation.

Along the left side of the tabulation are listed the items that would cause such increases. Each figure on this page comes from the appropriate section of Part II of this report where the effect of severance on North Shore's operation was discussed.

Q. What about subsection K? A. Subsection K on pages 537 through 539 is entitled "Statements of Income" and shows on page 539 the Statements of Income Actual for the years 1958 and 1959 and as pro formed to show the effect that severance would produce.

The adjustment columns which are the means of arriving at the Pro Forma totals are with respect to 1958 and, with one exception, taken from the Summary of Increased Cost table on page 537.

Q. What is that one exception, Mr. Quig? A. That is the adjustment for Federal Income Tax. This adjustment arises from two causes; the effect on North Shore's Income Accounts of the increase in expenses and a decrease in [706] revenues caused by severance, which will cause a decrease in Federal Income Tax Payable; and the loss of savings which accrued to North Shore through its participation in consolidated Federal Income Tax returns filed by NEES and its subsidiaries in 1958.

Q. What about the adjustment column with respect to 1959? A. The adjustments are the same as those for 1958, except that payroll is higher by five percent and Federal income tax adjustments reflect the 1959 situation.

Q. Does this complete your discussion of the section of the report which deals with the North Shore Gas Company? A. It does.

Q. To what extent is what you have said about North Shore applicable to the other gas companies? A. Of course, the facts and figures would be different for each company. But the pattern is the same and so are the principles and methods that we used in analyzing each of the gas companies. In particular, I can say that the approach to setting up the pro forma organization and other pro forma figures was the same for each of the gas companies.

Q. Mr. Quig, you have made clear that some functions of affiliated companies were handled jointly. Can I assume, therefore, that the electric companies would also feel the effect of the severance of the gas companies? [707] A. Yes. Five electric companies had considerable interrelated activities with gas companies and thus would be directly effected by the severance of the gas properties from NEES. These were, the electric department of the Lynn Gas and Electric Company, the Merrimack-Essex Electric Company,

Northampton Electric Lighting Company, Suburban Electric Company and Worcester County Electric Company.

The remaining nine electric companies did not have any material joint operations with any of the NEES gas companies. But they would be affected by the severance of the gas business because of NEPSCO. If the severance of the eight gas companies were ordered by this Commission, certain expense reductions could be instituted by NEPSCO that would partially offset the effect of the loss of billings from the gas companies. But there would still be some \$150,000 of net loss to NEPSCO from billings to gas companies that would have to be made up by the fourteen electric companies.

Q. Is there any section of the Ebasco report which explains the effect of the severance of the gas properties of the NEES system would have on those nine electric companies? A. Yes. The section in Volume II headed Other Affiliated Electric Companies. That is in Exhibit 58-B.

Q. Since Merrimack-Essex Electric Company has a number of inter-related activities with the North Shore Gas Company whose section of the Ebasco report you just explained, will [708] you continue your "guided tour" by taking us through the Merrimack-section of the report. A. Yes, sir, I will. If you will turn to page 1001 to 1022 of Volume II.

Q. What is the nature of Merrimack's service territory? A. It serves much the same type of territory as North Shore and a portion of its service area is coextensive with a large portion of the North Shore service area.

Q. Did any other affiliated gas companies operate in the area? A. Yes, in addition to North Shore, the Lawrence Gas Company operated in some of Merrimack's service area.

Q. What is the nature of the business of Merrimack?

A. It is engaged in the generation, purchase, transmission, distribution and sale of electricity in 26 cities and towns of Essex and Middlesex Counties in Massachusetts. Electricity was sold both at retail for ultimate consumption and at wholesale for resale.

Q. Will you please explain the section of the Ebasco report that deals with Merrimack? A. Just as in the case of the gas companies, each section is in two parts. The first deals with the Company as constituted on January 1, 1959 and the second with the effects of severance of the gas properties. A table of contents is shown on page 1002. [709] Q. Would you describe Part I, please? A. There are no subsections to Part I. It starts on page 1003 and runs to page 1006. It gives a thumb-nail sketch of the operations of the company. The tabulation on page 1004 indicates the distribution of customers as of December 31, 1958 and of annual revenues for 1958 by classes of service. A map of the service area appears on page 1005.

Q. Please describe Part II. A. Part II describes the effect of severance of the gas properties on the Merrimack-Essex Electric Company. The part is divided into subsections each dealing with functions or areas which would be affected by severance or with tabulations of the effects.

Q. Will you describe the first of these subsections? A. Subsection A on pages 1007 through 1009 concerns administrative, general supervisory and staff personnel. There would be no change in the basic company organization or its functioning but the severance of the gas properties would cause certain personnel to become full-time employees whose payroll cost was previously shared by the companion gas companies and who devoted a part of their time to gas company matters.

The tabulation on page 1009 has four columns and shows, reading from left to right, the classifications of personnel that would be affected and their salaries under the [710]

headings of Actual, Pro Forma and Increase. These salaries are at January 1, 1959 levels. Since our test year was 1958, it was necessary to reduce these salaries to those prevailing in that year. These adjustments are shown at the bottom of the tabulation.

The net effect of severance is shown at the right-hand bottom line in the short table at the end of subsection A on page 1009. The distribution of the increase is shown in the sentence under the tabulation.

Q. Does this figure appear elsewhere in this section of the Ebaseo report? A. Yes. It is shown in subsection H on page 1020 in the Summary of Increased Costs of Merrimack caused by severance of the gas properties.

Q. Will you tell us about subsection B. A. Subsection B, beginning on page 1009 through 1011 indicates the effects of severance of the gas properties on Merrimack's Distribution Department in Service and Meter and Garage covered in the two subsections numbered B-1 and B-2 respectively. Each of these subsections has a tabulation in the same form as that on page 1009 which I just discussed, as well as a brief table of the net effect of severance on that function of Merrimack.

Q. Will you continue, please? A. Subsection C on Treasury and Accounting covers [711] pages 1012 to 1017. It has three subsections: C-1 General Accounting, pages 1012 to 1013; C-2 Customer Accounting and Collecting, pages 1013 to 1016; and C-3 Stores Accounting on pages 1016 and 1017. Earlier I devoted some time to how the Northeastern District Treasury Organization was handled in the gas section of the report. With those comments and the fact that this subsection in effect represents the other side of the coin, I feel that the material on these pages can be easily understood.

There is a detailed tabulation of the effects of severance

and a brief statement of the net effect at the end of the subsection for inclusion in the subsection H summary.

Q. How about subsection D? A. The subsection D is on page 1017 and concerns the effect of severance on Merrimack through increased NEPSCO billings. This is the same item that applies to all of the electric affiliates of NEES which I discussed earlier. The basis for the higher billing is based on the section of the report relating to the Service Company.

Q. Would you explain subsection E relating to rentals? A. I believe that this subsection is fairly self-explanatory. What I said in my discussion of this subsection in the North Shore report is true here. The net effect caused by severance is shown at the top of page 1018.

[712] Q. Will you discuss subsection F? A. This subsection at the bottom of page 1018 discusses transportation costs and, I believe, is self-explanatory.

Q. How about subsection G? A. This subsection appears on page 1019 and covers the Miscellaneous items. There are many of these though none are large. They are adequately described in the text and the tables show the net effects of severance on the appropriate income accounts of the company.

Q. Will you now discuss sub-section H on page 1020? A. This sub section summarized the net effect of severance of the gas companies from NEES on the income accounts of Merrimack-Essex Electric Company.

The left side of the table shows the items that would cause the increases while the Income Accounts in which the increases would occur are shown across the top of the table. Each figure on this summary comes from the appropriate sub-section of Part II of this section of the report.

Q. Are these figures carried through to the Statement of Income on page 1022? A. Yes. Sub-section I on pages

1021 to 1022 contains Statements of Income for 1958 and 1959 on an Actual and Pro Forma basis after severance of the gas properties. The adjustment column for 1958 which is used to arrive at the Pro Forma totals contains the figures from the Summary of [713] Increased Cost tabulation on page 1020 plus an appropriate reduction in Federal income taxes arising from the increased costs of Merrimack caused by the severance of the gas properties from the NEES system.

Q. Mr. Quig, you have now reviewed with us a section of the report dealing with one of the electric companies affected by severance. Would you say that the approach and methods in making the study set forth in this section was that which was generally used in dealing with the electric companies which operate on a joint basis with what you call companion gas companies? A. Yes, I would say that. Of course, because the extent of commingled activities varies considerably among the various areas of the system where gas and electric operations are joint, the facts and figures will show considerable variance from one electric company to another. However, in general, I would say that the methodology is the same.

Q. Having now taken us through a section of the report dealing with a typical gas company and one dealing with a typical electric company, would you now review with us very briefly the section of the report on NEPSCO? A. The report on NEPSCO is contained in the first part of Exhibit 58-B. The first part of the report is devoted to the history and present organization of the company, a [714] description of the services provided by the company to the gas and electric companies, and a description of the methods of billing the operating companies for services performed by NEPSCO.

If you will turn to page 1516, there is a discussion of the 1958 billings to the gas companies, and in connection

with those there are two tables, which appear at the end of this portion of the report.

Q. Since I will ask another witness to explain these in some detail, will you please move on to a description of the effect of severance on NEPSCO? A. We will start on page 1517. The remainder of the report deals with the effect of severance on NEPSCO. As is noted, the bulk of this effect is in the service division and this is considered here first.

On Pages 1517 and 1518 are shown the reduction in servicing division personnel which we believe to be possible in the event that NEPSCO no longer services the gas companies. I can tell you frankly that we are a little doubtful that all of these people could actually be eliminated without impairing the quality of the service which NEPSCO could render to the electric companies.

Q. What would be the effect on the construction division of NEPSCO? A. If you will look on page 1518 of the report, it is [715] somewhat easier to ascertain this since there are certain specific individuals in this division who work almost solely on gas matters. The figure shown on page 1518 represents the reduction in NEPSCO expense which we believe possible. For the reason stated, no reduction can be assumed as possible in the engineering division.

Q. What is the total effect on NEPSCO of severance? A. There would be a substantial expense load to be assumed by the remaining electric companies. We estimate this to be \$150,000 per year, of which \$50,000 would go to the non-operating or plant accounts of the electric companies, and \$100,000 to their operating expense.

Q. Will you explain the table on page 1520? A. We have allocated this increased burden on the electric companies, and have used a Gross Operating Revenue Basis.

Mr. Quarles: Mr. Hearing Officer, having now had this proposed exhibit described, I offer it as Exhibit 58-A and B in evidence.

Hearing Examiner Ewell: Is there any objection?

Mr. Nowlin: Mr. Examiner, we haven't had a chance to analyze or consider this report at all prior to the hearing this morning, and I can see one or two items concerning which I have serious doubts as to whether they have any relevancy or materiality to the issues involved.

[716] I would therefore suggest that Mr. Quarles withhold his offer until the staff has had a chance to examine this further. We are just in no position to pass on it this afternoon.

Hearing Examiner Ewell: I can reserve ruling on it. That would accomplish the same purpose.

Mr. Nowlin: I would suggest then that you do reserve your ruling until we have had a chance to study it more and reach a decision as to whether or not we think some of these matters are relevant.

Mr. Quarles: I certainly have no desire to press for an immediate decision on it. I am rather surprised that it is suggested that there is any part of it that isn't relevant, but if there are doubts about it, I will agree to postponement of the ruling.

Hearing Examiner Ewell: Of course, having been marked for identification, it will be available for examination and for use in the examination of witnesses.

Mr. Quarles: Yes, sir.

Hearing Examiner Ewell: And subject to any objection which might be raised as to any particular portions as it arises.

Mr. Nowlin: Well, it constitutes a mass offer which we haven't had a chance to examine, and I don't want to be obstructed. I don't want to go ahead without [717] having a chance to analyze and consider it.

Mr. Quarles: I cannot say that is an unreasonable position for counsel to take.

By Mr. Quarles:

Q. Mr. Quig, I show you two tables stapled together, each headed "New England Electric System—Adjustments to Statements of Income of Eight Massachusetts Gas Companies Owned by NEES Caused by Severance of Gas Business."

One of these is for the twelve months ended December 31, 1958 and the other for the twelve months ended December 31, 1959, and I ask you whether these were prepared under your supervision and whether they correctly set forth the information they purport to show? A. Yes, they do.

Mr. Quarles: I will offer these exhibits as No. 59.

Hearing Examiner Ewell: Any clarifying questions or objections?

Mr. Nowlin: I was just asking, Mr. Examiner, which ones he was offering as No. 59.

Mr. Quarles: The gas exhibits, consisting of two pages stapled together.

Hearing Examiner Ewell: I assume there is no objection to its receipt?

Mr. Nowlin: No objection.

[718] Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit 59 was marked for identification and received in evidence.)

The Witness: Referring to what has been identified as Exhibit No. 59, each of the eight sections of the report that deal with gas companies contains a statement of income, actual and pro forma, for the twelve months ended December 31, 1958 and 1959. In order to arrive at the pro forma figures, a column for the adjustments made necessary by severance is included in each statement of income. We have tabulated by Company the data under

these adjustment columns to arrive at the total effect of severance on the eight companies.

By Mr. Quarles:

Q. Will you tell us, generally, what some of the larger of the increases in expenses are? A. 70 percent of the increase in operating expenses shown in the right hand column of \$1,385,000, or \$967,200 would be accounted for by three items. These three items, and the amount they would increase, are: Customer Accounting, \$409,600; Executive, Administrative and Staff, \$282,600; and Insurance, \$275,000.

Q. What would be some of the other increased items of Operating Expense? [719] A. Such items as increases in expenses for General Accounting, Professional Services, New Business, Stores, Inter-company Rents, Machine Accounting, Space Facilities, Production, Distributions and Utilization, etc., would account for \$418,600 or the remaining 30 percent of the increase in operating expenses.

Q. Have you also prepared tabulations showing the total effect on the income of the electric properties in the event of the severance of the gas business? A. I have.

Q. I show a two-page tabulation entitled "New England Electric System. Adjustments to Statements of Income of Fourteen Electric Companies Owned by NEES Caused by Severance of the Gas Business." Again, one is for 1958 and one is for 1959. Were these prepared under your supervision and do they correctly set forth the information they purport to show? A. Yes, sir.

Mr. Quarles: I offer them as Respondent's Exhibit No. 60.

Mr. Nowlin: Mr. Examiner, I would like to state, as to Exhibits 59 and 60, they seem to reflect compilations of some of the elements contained in the report concerning which we have some doubt as to the relevancy. I am not objecting to 59 and 60 as such, but I do not mean by that

[720] that I do not reserve complete freedom to attack the conclusions that are reflected therein at some later time.

Hearing Examiner Ewell: You mean you want to make further objection as to the significance?

Mr. Nowlin: That is right. I may have objections to the whole exhibit, once we have found there are any frailties in any of the computations reflected there. It may cast doubt on the validity of the whole exhibit, but I don't know what our position will be until we have had a chance to examine and consider them. What I am saying is I don't waive any freedom of action in respect of these exhibits or concede the probative value of these exhibits at this time.

Hearing Examiner Ewell: Well perhaps your position can be made clear later on, if necessary, by a motion to strike.

Mr. Nowlin: That might be the method for exposing it, but we are just not in a position to state whether or not we have any objections to these exhibits, because we don't have enough information to reach any conclusion.

Hearing Examiner Ewell: I think, in view of the tremendous volume of the material, Exhibit 58 being some 1500 pages, it is a reasonable position to take.

Mr. Quarles, have you any strenuous objection to it?

Mr. Quarles: As I understand Mr. Nowlin's position, [721] it is simply this. He is not objecting to these exhibits as such but does not want silence or consent to this to be interpreted as approval of material in Exhibit 58, which he has not yet examined.

Mr. Nowlin: That is right.

Mr. Quarles: I do not disagree with that. I am perfectly willing to have the exhibits accepted on that basis.

Hearing Examiner Ewell: They will be received in accordance with the statements placed in the record.

(Respondent's Exhibit No. 60 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Will you explain this Exhibit No. 60? A. The first sheet of the tabulation is for the twelve-month period ended December 31, 1958, the second for the twelve months ended December 31, 1959. They were prepared in the same manner as were those on the gas companies. As I mentioned before, all the electric companies will be affected by having to absorb the irreducible portion of NEPSCO costs. In addition, those electric companies which have interrelated operations with one or more of the affiliated gas companies will also suffer some loss of economies.

Q. I note that the effect of severance on the Gross Income before Federal Income tax of the fourteen electric [722] companies of the NEES System in 1958 would have been a decrease of \$804,800. What is the major reason for this decrease? A. The major reason for this decrease is the increase in operating expenses of \$663,400.

Q. Can you give us some idea of the larger of these increased items? A. 71 per cent of these increases in operating expenses of \$663,400 or \$472,200, would be accounted for by three items. These three items, and the amounts they would increase, are: Customer Accounting, \$323,700; NEPSCO billings, \$100,000; and Executive, Administrative and Staff, \$48,500.

Q. What would be the other increased items of Operating Expense? A. Such items as increases in expenses for New Business, General Accounting, Machine Accounting, Stores, Intercompany Rents, Transportation, Space Facilities, Production, Distribution and Utilization, would account for \$191,200 or the remaining 29 percent of the increase in Operating Expenses.

Mr. Quarles: Mr. Hearing Officer, I would again request the privilege of excusing a witness for the privilege of recalling him later.

Hearing Examiner Ewell: Certainly. Then this witness can step down at this time.

Mr. Quarles: Next I would like to call Mr. Harold [723] Dalbeck. Mr. Dalbeck has not previously been sworn, since he has not testified in this case.

Whereupon,

HAROLD L. DALBECK

was called as a witness for the respondents, and having been first duly sworn, was examined and testified as follows:

Direct Examination

Hearing Examiner Ewell: State your full name for the record.

The Witness: Harold L. Dalbeck.

By Mr. Quarles:

Q. Mr. Dalbeck, would you give the reporter your business address? A. 157 Pleasant Street, Malden, Massachusetts.

Q. What is your present position in the NEES system? A. I am the president of all eight of the NEES system gas companies, and as such I am the principal officer of the NEES system Gas Division.

Q. Mr. Dalbeck, will you give us a resume of your education and experience in the public utility industry?

A. I am a graduate of Northeastern University and have been connected with the public utility business for 38 years. During that period I have been associated with gas companies operating both separately from and in combination with electric companies.

[724] I was employed by the Worcester Gas Light Company in 1922 as an Accountant. This company was independent of any holding company affiliation until 1926 when it became a subsidiary of New England Gas and Electric

Association. In 1927, many of the activities of the New England Gas and Electric Association and its subsidiaries were centralized in Cambridge and my assignment was to organize the central office. Initially general accounting, sales, purchasing, stores, transportation and top management were centralized, and later customers' accounting as well.

During the period 1927 to 1940 I was General Auditor of the Association and General Auditor and Assistant Treasurer of its subsidiary companies.

In 1940, I joined the NEES system and was employed by the New England Power Service Company of which I was Treasurer from 1941 until 1951. I testified before this Commission in 1941 at the Service Company reorganization hearings, and was responsible for developing the accounting system which was necessary to maintain our records in conformity with the order of the SEC at that time.

In 1951, I became District Treasury Representative for all of the NEES system gas and electric retail subsidiaries in Massachusetts north of Boston, including the Mystic Valley Gas Company, North Shore Gas Company, Lawrence Gas Company, Suburban Electric Company, Merrimack-Essex Electric Company, [725] and their predecessors.

In August 1957, I was made President of all the Massachusetts gas companies of New England Electric System and of Lynn Gas Company when it was organized in February of 1960.

I am a Vice President of the New England Gas Association, the trade association that includes practically every gas company in New England, and a member of the PAR Committee of the American Gas Association. The PAR Committee being responsible for budget approval of all expenditures of the AGA for national advertising, public relations and fields of research.

Q. Will you now describe briefly your present position and responsibilities as President of the NEES system gas companies? A. As President of each of the NEES system gas companies and as principal officer of the Gas Division, I am responsible for the overall operation of these companies. I am responsible for the operation and maintenance of gas production and distribution facilities, customer service, promotion and sale of gas, promotion and sale of gas appliances, relations with customers and the general public, relations with regulatory and other public authorities, relations with employees, and all other matters pertaining to the operation of the gas companies. As president of each [726] company I report to its Board of Directors. I also report to the Vice President of the NEES system for Management, Mr. R. F. Krause, in relation to questions of NEES system policy.

Q. Are you familiar with the organization chart headed "New England Electric System—Holding Company System—Functional Organization Chart Electric and Gas Operations" which has been introduced in this proceeding as the respondent's Exhibit No. 53? A. Yes, sir, I am.

Q. Where is the NEES system Gas Division represented on that chart? A. The Gas Division is represented by the T-shaped group of blocks at the right-hand side of the chart headed by the block entitled "President of Gas Companies."

Q. Will you describe briefly the relations between the Gas Division and other parts of the NEES system represented on the chart? A. As the chart indicates, the only formal line of direct authority between the Gas Division and the rest of the NEES system is between myself as president of the gas companies, and the Vice President in charge of Management of NEES. There are, however, many other blocks on this chart that represent activities closely related to the operations of the Gas Division and

the gas companies. I will cite them [727] briefly starting at the right side of the chart. The Vice President and General Counsel handles practically all legal matters for the gas companies.

The Vice President in charge of Public Relations and his staff provide newspaper releases, advice on contacts with local officials, and cooperates in promotional advertising programs.

Six of the eight blocks directly under the Vice President in charge of Management, which are labelled "Rates", "Labor Relations", "Personnel", "Medical", "Safety" and "Regulations" represent service company personnel who work very closely with the gas companies when services of the nature that they provide are required and requested by the gas companies.

The Vice President and Treasurer serves as Treasurer of all NEES gas companies except Lynn, and accounting for the gas companies, as well as the electric companies, is performed on a combined basis by the organization under him. Under the Vice President in charge of Electric Engineering and Operations, purchasing is centralized for all gas and electric operations. We have some minor contacts also with people in construction and engineering, although the bulk of our engineering is done by personnel in the Gas Division.

The functions of the Vice President in charge of System Planning relate solely to the electric business; [728] analogous functions for gas being performed inside the Gas Division.

Q. Mr. Dalbeck, will you name the retail gas subsidiaries of New England Electric System? A. These companies are Central Massachusetts Gas Company, Lawrence Gas Company, Lynn Gas Company, Mystic Valley Gas Company, North Shore Gas Company, Northampton Gas Light Company, Norwood Gas Company, and Wachusett Gas

Company, all of which are incorporated and operate exclusively in Massachusetts.

Q. I show you a bound volume entitled "New England Electric System—Gas Subsidiaries—Maps Showing the Service Areas of Each of the Companies". Please tell what it shows. A. It contains individual maps of the service area of each of the NEES gas companies.

Q. And do they accurately set forth the information they purport to show? A. They do.

Mr. Quarles: I will offer this as Respondent's Exhibit No. 61.

Mr. Nowlin: I have no objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit No. 61 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. I should like now to have you give a certain amount of background information about each of these eight companies, in order, as a sort of introductory description.

First, will you outline briefly the corporate history of Central Massachusetts Gas Company? A. Central Massachusetts Gas Company was organized [728-A] in 1950. In 1951 it purchased the gas properties of Worcester County Electric Company and Spencer Gas Company. Spencer Gas Company had been organized in 1886 as a combination gas and electric company.

In 1922, it acquired the gas properties of Worcester County Gas Company in the towns of Warren, Brookfield, North Brookfield, East Brookfield, West Brookfield and Leicester. Spencer Gas Company joined the NEES system in 1931. Worcester County Electric Company was organized in 1887 and [729] authorized to do a gas business in 1888. In 1907, it purchased the gas and electric properties of Southbridge Gas and Electric Company.

In 1937, it acquired by merger the properties and fran-

chises of Worcester Electric Light Company. It joined the NEES system in 1927. Central Massachusetts Gas Company and its predecessors have served gas continuously for 89 years.

Q. Please describe briefly the company's service area.
A. The company serves approximately 9,700 customers, and operates in two divisions. The Southbridge division serves the towns of Southbridge, Dudley and Webster, and the Spencer division serves the towns of Spencer, Warren, Brookfield, West Brookfield, North Brookfield, East Brookfield, and a part of Leicester. The territory served comprises an area of 200 square miles and had an aggregate population, according to the 1955 census, of 61,266. The 9,700 gas customers of the company are served with electricity by the affiliate Worcester County Electric Company. The communities served vary from the industrial towns of Southbridge and Webster to those in the Spencer division which are predominantly rural. Most of the towns served are good residential communities.

The total 1959 sales were 754,943 NCF of which 54.4 percent were to domestic customers, 7.7 percent to [730] commercial customers, and 37.9 percent to industrial customers.

The heavy industries of the service area have concentrated principally in Southbridge and Webster, and the products manufactured include optical instruments, textiles, shoes, cutlery, toys and annealed wire products. The diversification of industry, coupled with the farming which is carried on in the area, makes its economy stable and well balanced.

Q. What are the company's principal physical properties?
A. The company owns 141 miles of mains. It has an L.P. air gas plant in Southbridge located behind a jointly occupied office owned by Worcester County Electric Company, and holder stations in Southbridge, Webster and

Spencer. It has two receiving stations for taking gas from Tennessee Gas Transmission Company, located in Spencer and in Southbridge.

The main office of the company is in downtown Webster, in an office building owned and also occupied by Worcester County Electric Company. The Distribution, production and utilization departments are located at the rear of this building in a building owned by the company and used for gas operations exclusively. A garage at this location is used jointly by both the gas and electric companies.

[731] Also, a building in downtown Spencer, which is leased by Worcester and sublet to the gas company, is used by both companies for sales and customer accounting activities, and the superintendent of the Spencer division of the gas company has his office there. The distribution and utilization departments of the Spencer division occupy with distribution personnel of the electric company another building owned by the gas company in Spencer.

Q. How many employes has Central Massachusetts Gas Company? A. Central Massachusetts Gas Company has a total of 61 employes, of whom 46 are fulltime employes.

Q. Will you please state briefly the corporate history of Lawrence Gas Company? A. Lawrence Gas Company was organized in 1951, and in 1953 purchased the gas properties and franchises of Lawrence Gas and Electric Company which had been incorporated as Lawrence Gas Company in 1849 and had been authorized in 1887 to also engage in the electric business. The company joined the NEES system in 1927. The present Lawrence Gas Company, or its predecessors, has provided continuous gas service for over 110 years.

Q. Please give a brief description of the Lawrence Gas Company's service area. A. This company serves approximately 33,000 customers [732] in the city of Lawrence and

the adjoining towns of Methuen, Andover and North Andover. Methuen, Andover and North Andover are predominantly residential communities, and all are experiencing rapid growth.

The company service area had a population in 1955 of 126,428 in an area of 87 square miles. All of the gas customers are also electric customers of the Merrimack-Essex Electric Company.

The total 1959 sales were 2,085,404 MCF of which 66.1 percent were to domestic customers, 9.5 percent to commercial customers, and, 24.3 percent to industrial customers.

The city of Lawrence was formerly a one-industry community, textiles being its predominant business. Following the war, however, a tremendous transformation has occurred, in which this area changed from one of the most depressed economic areas in the country to a thriving community of greatly diversified industry.

I might insert here that the gas and electric companies jointly and the NEPSCO industrial development department worked hard to help bring this change about. Electronics, communications equipment, plastic and rubber goods, paper and paper mill machinery, shoes, metal goods and textiles and textile machinery are some of the industries that now contribute to the well-being of the [733] communities served by the company.

Q. What are the company's most important physical properties? A. It has an oil gas plant and an L.P. air gas plant, 301 miles of mains, and a receiving station for taking gas from Tennessee.

The main office of the company is in downtown Lawrence in an office building owned and also occupied by Merrimack-Essex Electric Company. Storerooms, distribution, engineering, customer service, garage and the commercial and industrial sales department are located in other buildings

owned and occupied by Merrimack. The garage, customer service and stores are joint electric and gas operations.

Q. How many employes has the company? A. Lawrence Gas Company has a total of 148 employes, of whom 124 are fulltime.

Q. Will you state briefly the corporate history of Lynn Gas Company? A. Lynn Gas Company was organized in 1959 and on February 5, 1960 acquired the gas properties and franchises of Lynn Gas and Electric Company. Lynn Gas and Electric had been incorporated in 1853 as the Lynn Gas Light Company, and in 1888 had been consolidated with the Lynn Electric Lighting Company to create a combination gas and electric [734] company. In 1910 the Lynn Gas and Electric Company acquired the Marblehead Gas and Electric Company. Lynn joined the NEES system in 1957. Lynn Gas Company and its predecessors have rendered continuous gas service for 107 years.

Q. Please describe briefly the company's service area. A. The company serves approximately 41,000 customers in the city of Lynn and the towns of Lynnfield, Marblehead, Nahant, Saugus and Swampscott, and a portion of the city of Peabody.

Lynn is an industrial city; the remaining communities of the company's service area are principally residential. The company's service area is located in Essex County and covers approximately 41 square miles with a population, according to the 1955 census, of 156,169. 36,000 of the 41,000 customers served by Lynn Gas Company are provided with electricity by the affiliate Lynn Electric Company.

The total 1959 MCF sales were 1,698,403, of which 77.7 percent were to domestic customers, 15.6 percent to commercial customers, and 6.7 percent to industrial customers.

The economy of the area is dependent to a large extent upon the operations of the General Electric Company, four

of whose major departments have their headquarters in [735] Lynn and operate out of industrial buildings scattered throughout the city. In addition, other products manufactured in Lynn include incandescent and fluorescent lamps, shoes and shoe machinery, medicines, clothing, automotive and welding equipment, and bread and bakery products. There is also some small industry in Saugus. Route 128, Boston's circumferential highway, and Route 1 pass through Lynn Gas Company area and are important to the economy of the communities this company serves. Marblehead, Swampscott and Nahant are summer resort towns.

Q. What are the company's principal properties? A. It has an oil gas plant, 368 miles of mains, and a receiving station where it takes gas from Tennessee, all in Lynn. The gas plant adjoins the main electric plant of Lynn Electric, and electric production and distribution activities, gas production and distribution activities, and the service division personnel are at this location. The main office of Lynn Gas Company is an office building, which, together with a customer service building and a garage, all owned by the gas company, are used by both the gas and electric companies. The gas company leases a branch office store at Marblehead.

Q. How many employes has Lynn Gas Company? A. Lynn Gas Company had a total of 174 employes, of whom 165 are fulltime employes, at February 1, 1960.

[736] Q. Would you state briefly the corporate history of Mystic Valley Gas Company? A. On October 27, 1953 Malden and Melrose Gas Light Company acquired the gas properties of Suburban Gas and Electric Company, and Arlington Gas Light Company, and changed its name to the Mystic Valley Gas Company. Malden and Melrose Gas Light Company was organized in 1854. In 1856 it extended its mains into Medford, and in 1883 into other

surrounding towns. In 1912 it acquired by merger the property and franchises of Peoples Gas and Electric Company of Stoneham.

Suburban Gas and Electric Company was organized in 1895 as a combination gas and electric company in Revere and Winthrop. Arlington Gas Light Company was incorporated in 1854 to make and sell gas in what is now Arlington. In 1860 it was authorized to do business in Winchester and in Belmont. In 1933 it purchased the property and franchises of the Lexington Gas Company and the Woburn Gas Light Company. Malden and Melrose, Suburban and Arlington all joined the NEES system in 1931. This company has provided continuous gas service for 106 years.

Q. Please describe briefly the company's present service area. A. The company serves approximately 99,000 customers in 14 communities in an area of 102 square miles. The territory [737] served had an aggregate population of 437,133 people by the 1955 census.

Suburban Electric Company, an affiliate, provides electric service to 67,000 of Mystic's customers in Everett, Malden, Medford, Melrose, Revere and Winthrop.

Boston Edison Company, a nonaffiliate, provides electric service in Arlington, Burlington, Lexington, Stoneham, Winchester and Woburn, while Belmont and Reading have municipally-owned electric systems.

The service area of the company is predominantly residential with a sprinkling of heavy and light industry, the heavy industries principally in Everett and Malden.

The total 1959 sales to ultimate customers were 4,874,213 MCF. 77.6 percent of these sales were domestic, 11.0 percent were to commercial customers, and 11.4 percent were to industrial customers. In addition, 149,074 MCF were sold to the town of Wakefield for resale.

The principal products manufactured include petroleum

products, chemical products, machinery and metal goods, food products and electronic equipment and components.

Route 128, Boston's circumferential highway, passes through a part of this company's territory. Dozens of new plants have been built along this highway, and the products they manufacture range from missile system guidance equipment to packaged tea bags. Commercial establishments from [738] shopping centers to restaurants are spread throughout this residential and industrial area. Amusement facilities include the Revere Beach amusement area, a dog racing track, and a horse racing track are prominent in the territory.

Q. Will you describe briefly Mystic Valley Gas Company's most important properties? A. The company has an oil gas plant in Malden and L.P. air plants in Malden and Reading, storage holders in Malden, Arlington, Revere and Winchester, and 916 miles of mains. It has four receiving stations located in Malden, Arlington, Reading and Lexington for taking natural gas from Tennessee Gas Transmission Company.

The principal office of the company is in Malden, in an office building owned and also occupied by Suburban Electric Company. The company has other buildings in Malden.

A service order center for a portion of the company's territory and a garage are located in facilities owned by Suburban Electric Company in Malden, and operated jointly with the electric company. There are ten branch stores located at Arlington, Winchester, Reading, Stoneham, Woburn, Medford, Revere, Everett, Melrose and Winthrop. The first five of these stores are all gas, while the last five are occupied jointly with Suburban.

Q. How many employes has Mystic Valley Gas Company? [739] A. Mystic Valley Gas Company has a total of 401 employes, of whom 364 are fulltime.

Q. Will you state briefly the corporate history of North

Shore Gas Company? A. North Shore Gas Company was organized in 1953 to take over by purchase the gas properties and franchises of Beverly Gas and Electric Company, and by consolidation the gas properties and franchises of Salem Gas Light Company and Gloucester Gas Light Company.

Salem Gas Light Company was organized by a special act of the Massachusetts Legislature in 1847 to supply gas in the city of Salem, and was given the right to serve what is now Peabody in 1853.

Beverly Gas and Electric Company was organized in Massachusetts in 1859 as a gas company and authorized to do electric business in 1888. In 1911 it purchased Danvers Gas Light Company.

Gloucester Gas Light Company was organized in 1853 to do business in the town of Gloucester, and later it extended its service into part of the town of Rockport. Gloucester, Salem and Beverly all joined the NEES system in 1931. The company and its predecessors have thus been providing continuous gas service to customers for 113 years.

Q. Please describe briefly the company's service area.
A. The company has approximately 33,000 customers, and [740] operates in two divisions. The Salem division includes the cities of Salem, Beverly, Peabody and the town of Danvers, The Gloucester division serves the city of Gloucester and part of the town of Rockport. Approximately 24,000 of the company's customers are served electricity by the affiliate Merrimack-Essex Electric Company. Danvers and Peabody have municipally-owned systems.

The total franchise territory served comprises an area of 85.4 square miles and had an aggregate population by the 1955 census of 146,231.

The total 1959 MCF sales by the company were 1,638,676,

of which 71.1 percent were to domestic customers, 14.5 percent to commercial customers, and 14.4 percent to industrial customers.

The products manufactured in this area include leather and leather goods, electronic equipment and components, incandescent and fluorescent lamps, shoe machinery and metal products, cellophane tape, chemicals, and gelatin for film processing. The fish and fish processing industry in Gloucester and the summer tourist trade throughout the entire company area play an important part in the economy. Two major Massachusetts highways, Route 1 and Route 128, also contribute to the prosperity of this area.

Q. What are North Shore Gas Company's principal [741] properties? A. There is an oil gas plant in Salem and L.P. air gas plants in Salem, Danversport and Gloucester, and low pressure holders in Salem and Beverly, and high pressure Horton-spheres in Gloucester and Beverly. The company has 348 miles of mains and two receiving stations, one at Danversport for the Salem division, and one at Gloucester for the Gloucester division.

The main office of the company is located in downtown Salem, in an office building leased and also occupied by Merrimack-Essex Electric Company. The branch office of the Salem division is located in Beverly in a business block owned by the gas company. There are also two branch stores in Danvers and Peabody. The Gloucester division office is located in Gloucester in a building owned by the company and used jointly with Merrimack.

All functions of the distribution, utilization and stores groups are carried on at the Beverly plant. A garage which services both Merrimack and North Shore vehicles is located here. Merrimack has property directly adjoining this plant and a right-of-way through the company's property.

Q. How many employes has North Shore Gas Company?

A. North Shore Gas Company has a total of 152 employees, of whom 130 are fulltime employees of the company.

[742] Q. Now will you please outline the corporate history of Northampton Gas Light Company? A. Northampton Gas Light Company was incorporated in 1853. In 1935 it purchased all the property and franchises of Easthampton Gas Company. It joined the NEES system in 1931. Continuous gas service has been provided by the company for 107 years.

Q. Please describe the company's service area. A. The company serves approximately 8,000 customers in the communities of Northampton and Easthampton. The territories served include an area of 47.9 square miles and had an aggregate population, according to the census in 1955, of 37,969.

Electric service in Northampton is provided by the Northampton Electric Lighting Company, an affiliate of NEES, to approximately 5,800 of the company's customers. Western Massachusetts Electric Company, a nonaffiliate, provides electric service at Easthampton.

The two communities served differ from each other. Northampton is basically a college town. It has three large hospitals, and relatively little industry. Easthampton, on the other hand, contains substantial industrial activity.

Principal products manufactured include cutlery, optical instruments, plastics, batteries, rubber thread, [743] furniture and brushes. In addition, a large textile dyeing and finishing mill is a major industry in Easthampton.

The total MCF sales in 1959 were 466,767. 74.0 percent of these sales were to domestic customers, 13.6 percent to commercial customers, and 12.4 percent to industrial customers.

Q. What are Northampton Gas Light Company's principal properties? A. Northampton Gas Light Company has

an oil gas plant, 111 miles of mains, and one receiving station. It is expected that this oil gas plant will be replaced by an L.P. air gas plant at the receiving station during 1960. The company has holder locations in Northampton and Easthampton.

The main office of the company is in downtown Northampton in a building owned by the gas company which is also the principal location of activities and personnel of Northampton Electric Lighting Company. This location includes a three-story office building, a storehouse, and a garage, all of which are used jointly by the gas and electric companies. In addition, there are other buildings used for gas operations exclusively. All departments of the gas company work out of this location.

Q. How many employes has Northampton Gas Light Company? A. Northampton Gas Light Company has a total of 55 employes, of whom 38 are fulltime employes.

[744] Q. Now would you please state briefly the corporate history of Norwood Gas Company? A. Norwood Gas Company was incorporated in 1907. In 1908 it purchased all the property of Norwood Gas Light Company which had been organized in 1885 to do gas business in the town of Norwood. The customers of Norwood Gas Company have had continuous gas service since 1908.

Q. Briefly describe the company's service area. A. The company serves approximately 4,700 customers in the town of Norwood. Norwood is predominantly a residential community with one large manufacturer, a sprinkling of light industry, and nearly 200 retail establishments. The area served by Norwood Gas Company is approximately 10 square miles and had a population, according to the 1955 census, of 21,052. The Norwood Municipal Light Department provides electric service for the town.

The total 1959 MCF gas sales by the company were 281,000, of which 77.1 percent were to domestic customers, 16.4

percent to commercial customers, and 6.5 percent to industrial customers. The principal products manufactured in the area include composition shingles, floor covering, precision instruments, food products, paints, valves, books, and power equipment for switchboards. U. S. Route 1 bisects the town and Route 128 passes near it. In addition, an excellent airport provides a terminal for private [745] aircraft.

Q. What are the company's chief properties? A. The company has an L.P. air plant, 72 miles of mains, and a receiving station where it takes gas from Algonquin Gas Transmission Company. A garage for company vehicles and a plant office are located at the plant. The main office is located in the principal business area of Norwood in leased space.

Q. How many employees has Norwood Gas Company? A. Norwood Gas Company has a total of 39 employees, of whom 20 are fulltime employees.

Q. Mr. Dalbeck, will you briefly state the corporate history of Wachusett Gas Company? A. Wachusett Gas Company was incorporated in 1873 as Leominster Gas Light Company, to do business in Leominster. In 1951 it purchased the gas properties of Wachusett Electric Company in Clinton and Lancaster, which had been acquired from Clinton Gas Light Company in 1934, Clinton having been organized in 1854. Wachusett Gas Company and its predecessors have rendered continuous gas service in some areas, therefore, for 106 years.

Q. Reverting once more to the Norwood Gas Company, does the fact that Norwood purchases its gas from Algonquin affect its relationship to the other seven companies? A. No, sir, it does not. The only difference is that [746] their supplier is the Algonquin Gas Company.

It has an L.P. air gas plant as do many of our other companies, and benefits accrue to the Norwood gas plant

because of group purchasing of fuel, and the engineering assistance they obtain from the gas division office. Their operating procedures and practices are consistent with all the NEES gas companies, and they achieve economy and efficiency as a part of the NEES group of gas companies.

Q. Now, coming back to Wachusett, will you briefly describe its service area? A. The company serves approximately 8,000 customers in the city of Leominster and the towns of Clinton, Lancaster and part of Lunenberg. Worcester County Electric Company, an affiliate, provides electric service in Clinton, Lancaster and Leominster. Fitchburg Gas and Electric Company, a nonaffiliate, provides electric service in Lunenberg.

The communities served by the company are, for the most part, residential communities located in Worcester County in central Massachusetts. The company service area is approximately 88 square miles and had a population, according to the 1955 census, of 46,258.

The total 1959 MCF sales were 389,966. 83.7 percent of these sales were domestic, 11.6 percent were commercial, and 4.7 percent were industrial sales.

[747] The industrial prosperity of the area is dependent to a large degree upon the plastic industry and its associated lines. In the Leominster area the major industry is the production of plastics, plastic products and molds. Other industries in Leominster produce shirts, furniture and paper products. The principal industries in the Clinton area produce plastic-coated wire, plastic tile, books, flashlights, batteries and textiles.

Q. Please describe the company's chief properties. A. Wachusett Gas Company has an L.P. air gas plant and a storage holder in Leominster and another storage holder in Clinton. The company has 97 miles of mains and two receiving stations, one in Leominster and one in Clinton.

The main office of the company is located in Leominster, Massachusetts, in an office building leased by Worcester County Electric Company and also occupied by them. The gas company has a branch store in Clinton in a building owned by the Worcester County Electric Company and occupied jointly by them. A jointly operated stores department is located in a building owned by Worcester County Electric in Leominster. A second building owned by Worcester is used by Worcester and the gas company for a dispatching headquarters after working hours up to midnight. In addition, a combination garage and storage building in Clinton, which is owned by the Worcester [748] Company, garages a service truck of the gas company.

Q. How many employes has Wachusett Gas Company?
A. The Wachusett Gas Company has a total of 43 employes, of whom 27 are fulltime employes.

Q. Mr. Dalbeck, some of these companies have had a rather complex corporate history. Were the various mergers, consolidations, purchases and separations of gas and electric properties referred to in your description specifically authorized by any governmental agency in Massachusetts? A. Yes. In the early days of the industry, control of gas companies was exercised directly by the General Court of Massachusetts which is the State Legislature. The legislature incorporated companies by special act for the purpose of manufacturing and distributing gas. By amending the special act, the legislature sometimes authorized companies to extend their gas mains into new territory.

In the early days gas companies could only consolidate or merge by specific authorization from the legislature. In 1885 the legislature delegated to the Board of Gas Commissioners general supervisory powers over gas companies. In 1887 the board was empowered to authorize gas companies also to engage in the electric business. The

name of this board was changed to the Board of Gas and [749] Electric Light Commissioners in 1889 and its supervision was also extended to electric companies.

In 1908 the legislature authorized purchases and sales, mergers and consolidations of certain types of utilities upon a determination, in each case, by the Commissioners, after a public hearing, that the proposed transaction was consistent with the public interest. By a special act in 1919 the functions of the Board of Gas and Electric Light Commissioners were transferred to the newly created Department of Public Utilities, which is the present regulating authority in Massachusetts.

Q. Mr. Dalbeck, I now hand you a table entitled "New England Electric System-Gas Subsidiaries-Natural Gas Purchase Contracts" and ask you what it shows. A. This shows the location of take points and certain summary information about each NEES gas company's natural gas supplies. It shows for each company the gas supplier, the authorized daily quantity of gas under various service headings, and the termination dates of the company's present contracts.

Q. Was this table prepared under your supervision? A. Yes, it was.

Q. And does it accurately set forth the information it purports to show? A. It does.

[750] Mr. Quarles: I offer this table as Respondent's Exhibit 62.

Mr. Nowlin: No objection.

Hearing Examiner: Received.

(Respondent's Exhibit No. 62 was received in evidence.)

By Mr. Quarles:

Q. Next, Mr. Dalbeck, I show you a table "New England Electric System-Gas Subsidiaries-Gas Production Plants" and I ask you what it shows. A. It shows for each of the

gas production plants in the system the type of gas it produces and its daily capacity.

Q. Was this table prepared under your supervision?
A. It was.

Q. Does it accurately set forth this information it purports to show? A. It does.

Mr. Quarles: I offer this table as Respondent's Exhibit 63.

Mr. Nowlin: No objection.

Hearing Examiner: Received.

(Respondent's Exhibit No. 63 was received in evidence.)

By Mr. Quarles:

[751] Q. Now I show you a table entitled "New England Electric System-Gas Subsidiaries-Gas Purchased and Produced-1959" and ask you what it shows. A. This shows the amount of gas produced and purchased by each of the NEES system gas companies during 1959. It breaks down the purchased gas into two categories—general service gas and peak service gas. It also breaks down the gas produced into oil-gas and L.P. air gas.

Q. Was this table prepared under your supervision?
A. It was.

Q. And does it accurately set forth the information it purports to show? A. It does.

Mr. Quarles: I offer this table as Respondent's Exhibit 64.

Mr. Nowlin: No objection.

Hearing Examiner: Received.

(Respondent's Exhibit No. 64 was received in evidence.)

Q. Returning now to Exhibit 62, which has to do with natural gas purchase contracts, I note that the largest amount of gas contracted for is under general service, and that the supplier of most of the system companies is Ten-

Tennessee Gas Transmission Company. Will you please give a brief description of Tennessee Gas Transmission's [752] general service rate? A. Tennessee's principal general service rate is its G-6 rate which provides for a requirements contract under which the pipeline obligates itself to deliver all gas required by a customer company up to the maximum quantity authorized by the FPC. In the event that the customer requires a greater quantity than the maximum authorized, the pipeline company is obligated to use due diligence to secure authorization to deliver the greater quantity, and to install any needed increased capacity to enable it to do so.

The current rate for service under this contract consists of a monthly demand charge of \$6.15 per MCF for the highest day's consumption during the current month and the preceding 11 months, and a commodity charge of 36.1 cents per MCF taken.

Under this contract and all of Tennessee's contracts with our companies delivery is at a pressure elected by the buyer, but not in excess of 100 pounds per square inch. The Btu of the gas is required to be not less than 1000 Btu per cubic foot.

Q. Will you now describe briefly the Algonquin general service rate? A. The Algonquin general service rate is the F-1 rate. This is a contract quantity form of rate under which [753] a customer must estimate his maximum requirement and pay the demand charge for that amount starting on September 1 each year.

The current rate in effect since December 1, 1959 is a monthly demand charge of \$6.34 per MCF of contract demand and a commodity charge of 33.5 cents per MCF. This rate further provides that the pipeline need only deliver 270 times the maximum daily quantity during the whole contract year. The terms and conditions of Algonquin's tariff provide that delivery shall be at pressures

not less than 50 pounds per square inch guage. A minimum Btu value of 1000 Btu per cubic foot is required.

Q. What are the principal differences or advantages of one rate over the other? A. Well, the basic answer to which rate is preferable comes down to cost. At the present time the rates of the two pipelines are substantially the same. Whatever balance there may be, has been tipped over the past years each time one company or the other has filed a rate change.

As to the advantages in the terms of one rate over the other, these are mixed. For example, the Algonquin rate has an advantage in that it combines deliveries at all delivery points for billing purposes while the Tennessee rate requires separate billing for each delivery point.

In the case of a company such as Mystic Valley, [754] which has four delivery points, it is possible to get non-coincident maximum demands. In this event, the total demand charge paid by the company becomes higher than the greatest amount of gas used by the company on any one day. On the other hand, under the Tennessee rate, demand is based on the maximum day volume actually taken during the year ending with the current month instead of an estimate of a future maximum day requirement. This means that the Tennessee customers do not start paying for a new year's higher demand until that demand is actually taken whereas, under the Algonquin rate, Norwood has to begin paying for its new contract demand in September even though it may not use that demand until well into the winter. Also, Norwood pays for the contract demand which is an estimate containing a margin to avoid overrun penalties, and therefore usually is somewhat higher than actual maximum usage.

The Algonquin restriction of annual deliveries to 270 times the contract demand would be somewhat burdensome to a company that can sell all of its summer valley gas as

interruptible gas, as the Lynn and Central Massachusetts Gas Companies do.

Algonquin has an interruptible rate I-1 which has no demand charge and a commodity charge just one-half cent above the general service commodity charge. [755] This makes possible substantial sales of interruptible gas by companies that have a market for it. Unfortunately, Norwood does not have such a market. The corresponding interruptible rate of Tennessee is priced at the 100 percent load factor cost, or at the present time 56.3 cents per MCF, which effectively prices it out of the market. We could not sell any gas at that rate even if it were offered.

Q. Mr. Dalbeck, do all of your companies buying gas from Tennessee take deliveries under the G-6 rate? A. No. Central Massachusetts Gas Company, for the Spencer division, and Wachusett Gas Company, for the Clinton division, buy gas under Tennessee's so-called small general service rate, its GS-6 rate. This rate, made available optionally to any customer company whose demand does not exceed 5000 MCF a day, is a flat rate for gas delivered, with no demand charge or minimum bill. The rate currently is 73.8 cents per MCF, which is equivalent to the G-6 rate at a load factor of slightly over 50 percent.

Q. Does Algonquin have a similar rate? A. No. We have tried to persuade Algonquin to provide a similar service to its small customers, but have not been able to get them to do it.

Q. You have described several forms of general service [756] rates and have mentioned interruptible service. Will you now describe briefly other forms of service? First, will you describe the interim service shown on Exhibit 62? A. Yes. The interim service is provided at the same rate as general service gas, but the interim contracts were just for this past winter and expire in October of this year. The reason for this is that for several years Tennessee

supplied peak-shaving service upon which these gas companies relied for part of their winter gas. It became apparent last fall that no similar service would be available this last winter.

The interim service was a means whereby New England gas companies which were forced into taking uneconomic demands this last winter, due to shortage of peak-shaving capacity, would be enabled to cut back those demands after they had installed additional peak-shaving capacity of their own. Next winter and in the foreseeable future all of our gas purchased from Tennessee will be under general service rates.

Q. What was the Tennessee peak-shaving service like?
A. It was a flat rate service offered by Tennessee at a price of 90 cents per MCF, designed to be used as a substitute for our own peak-shaving production. The price of this gas plus the qualifying clause requiring us to increase our billing demand for general service gas by [757] at least 10 percent each year was intended both to spur our house heating sales and to make some money for Tennessee that they otherwise would not get. Operating with this rate, we were allowed to take peak service gas on any day during the winter in a quantity up to 50 percent of the general service demand that we elected to pay for. The effect of this was that we had to peak shave with our own production on only two or three of the coldest days of the winter and then only to a very small extent.

Q. Why was this service terminated? A. Well, this service was supplied for 4 years under a temporary Federal Power Commission authorization, each year pending final determination. The FPC refused, during 1959, to grant permanent authorization. Tennessee applied for another form of peak service during 1959, but when it became apparent that this would not be approved in time for the 1959-1960 heating season the New England companies had

to withdraw their support of this application and requested the interim service which I have just described. The opposition to this type of service came chiefly from the Columbia Gas System, another Tennessee customer which has natural gas storage facilities of its own which enable it to take all its gas at a substantially 100 percent load factor.

[758] Q. Is the elimination of peak or storage service a serious blow to the New England companies? A. Yes, it is. We estimate that elimination of this service will cost the NEES system gas companies about \$500,000 per year.

Q. What is the winter service under which Norwood Gas Company buys from Algonquin? A. This is a form of peak-shaving service which Algonquin has offered for the past two winters. It is designed to be a substitute for the company's own peak-shaving in some measure and has been supplied under temporary authorization from the Federal Power Commission.

The permanent service is the subject of hearing at the present time. The service provides, in effect, for a maximum winter quantity, with a minimum take or pay for 60 days' use of the maximum winter quantity. The price for this gas as applied for is 87.5 cents per MCF. This last winter temporary authorization was granted at 96 cents per MCF. It is not now known whether this service will be permanently approved or what the price will be if it is.

Q. Mr. Dalbeck, will you please describe the emergency service which appears on Exhibit 62 as under contract to Mystic Valley Gas Company? A. Algonquin's main line runs through Mystic Valley's [759] territory, and at one point it is within a few hundred yards of a main high pressure trunkline of Mystic Valley. It seemed to us that good judgment called for a connection for use in case of emergency. We paid for the connection and pay a monthly rental for its operation and maintenance.

Algonquin is obligated in case of emergency to deliver

up to 1000 MCF per hour if it can do so without jeopardizing service to its own firm customers. Incidentally, this connection was used two years ago when Tennessee had a break on their line out in New York State. Tennessee backed off on deliveries directly to Mystic Valley and delivered gas to Algonquin in New Jersey for delivery to Mystic Valley for Tennessee's account.

Q. How does the FPC regulate your gas supply contracts? A. Basically in two ways. First, the pipeline company cannot supply any service without a certificate of public convenience and necessity. This has to do with the amount of gas the pipeline company is authorized to contract to deliver us. Secondly, the FPC has jurisdiction over rates. The contracts do not fix rates, but provide for service at rates to be established from time to time. These rates are filed by the pipeline company subject to hearing and approval by the FPC.

[760] Q. Turn now from natural gas to manufactured gas. What kind of manufacturing facilities do the NEES companies have? A. These are all set forth in Exhibit 63. Today there are just two kinds of plants. The oil gas plants make gas from No. 2 oil, the L.P. air gas plants simply vaporize liquid propane and mix it with air in the amount required to make it compatible with natural gas.

Q. Are these plants of the same type as those which were in use by the NEES system companies prior to the advent of natural gas in New England? A. No, not quite. Prior to the advent of natural gas these companies made and sold gas with about half the heat content per cubic foot of natural gas. Changing to natural gas required a change-over of appliances for use of the richer natural gas. The old manufactured gas would be incompatible with natural gas, and therefore manufacturing facilities had to be converted also.

The oil gas plants were all in existence prior to 1952,

but they produced water-gas, and it was relatively easy to convert them for oil gas manufacture. Most of the L.P. air gas plants, on the other hand, are new since around 1952.

Mr. Nowlin: May we have a short recess?

Hearing Examiner Ewell: Yes. We will recess [761] for ten minutes.

(Whereupon, a short recess was taken, after which the hearing was resumed.)

By Mr. Quarles:

Q. Mr. Dalbeck, just before the recess, we were talking about the manufacturing facilities, and you were mentioning some of the plants. For what purpose were these plants built or converted? A. At the time of conversion to natural gas in 1951 and 1952, we were connecting up to a new, untried pipeline from Buffalo east, approximately 500 miles. It was a single line with two major river crossings. We considered it prudent to provide backup production in case this unseasoned single line might experience a failure that would cut off our gas supply. Consequently, we converted our existing Water Gas plants to Oil Gas and in some cases installed new L.P. Air gas plants. The plants are now assuming a second important function in peak-shaving.

Going back to the natural gas purchase contracts and rates of Tennessee, and its predecessor Northeastern Gas Transmission Company in New England, the rates provided that for a three-year development period the monthly billing should not exceed the 70 percent load factor cost for gas used.

Accordingly, in the first two winters it was not [762] necessary to use our production plants for substantial peak-shaving. During the third winter the plants were used for peak-shaving.

Then in 1955 Tennessee offered its peak-shaving rate to be used as a substitute for peak-shaving by manufacturing.

Thus it continued to be uneconomical to operate our own plants except on a few extremely cold days during a winter. This last winter, without either the development period rate ceiling, or the peak-shaving rate, we have come into the period of what is apparently going to be our normal operation of production plants. With a normal winter we would have expected to operate approximately 30 days. Since it was a relatively mild winter we had to produce gas in most companies on fewer days than that.

Q. What determines whether you buy natural gas or produce your own gas? A. Economies. Our own production plants at present prices of propane and light oil can produce gas at an incremental cost in the range of \$1.65 to \$1.70 per MCF of 1000 Btu equivalent gas. Tennessee's G-6 rate is \$6.15 demand charges and 36.1 cents per MCF commodity charge. Our companies have a firm gas load factor in the range of 40-50 percent. The maximum day sendout is more than double the average day sendout and four to five times the minimum sendout. The Tennessee rate works out so that if more gas [763] is taken on one day of the winter than any other, the excess gas on that day costs \$74.16 per MCF. It is obviously cheaper to make gas at \$1.70 per MCF than to buy gas at \$74.15. The balancing point at which producing gas and buying gas are equal in cost works out at about a 38-degree day. In other words, it is cheaper to produce gas to provide for excess requirements above 38-degree days on any day.

Q. Are your production plants the most economical method of peak-shaving? A. They are, for our companies under present circumstances. The most economical method would probably be underground storage of natural gas in a worked-out gas field, if there were one in our area. Off peak pipeline gas could be compressed into it and withdrawn again on peak days. If we could find a so-called watersand that could be sealed, such as the Herscher Dome

development of Peoples Gas Light and Coke Company that could be developed and used in the same manner, this would be the next best.

However, the geologists give us no hope of finding such formation in New England. We are not as fortunate in that respect as the Appalachian area or much of the mid-continent area or California. In some areas nearer to the gas fields the ratio of demand charges to commodity charges is much lower and customers simply purchase all the gas that they need.

[764] Conventional above-ground storage of natural gas is prohibitively expensive. Therefore, we are presently forced back to producing gas. Presently proved types of reasonably interchangeable gas are oil gas and L.P. Air gas such as we have. Our oil gas plants use light oil and make a relatively expensive gas. Oil gas can be made from heavy oil at a much lower incremental production cost, but this requires a much greater investment in plant. It would require a much greater volume of annual production than we have to justify this greater investment. We are studying several possibilities of more economical peak-shaving—lower cost substitute gas, larger volume storage of propane and liquified natural gas. In the meantime, we are using existing facilities to the full, and adding production capacity where required in the form of L.P. Air gas which has the lowest capital cost.

Q. What is the source and supply of your gas making fuels? A. The two fuels we use are a light oil—No. 2 for making oil gas, and liquified propane for making L.P. Air gas. These are both supplied by our competitors, the oil companies. Light oil, so far, has been in plentiful supply. We maintain storage equal to about two thirds of the estimated winter's requirements, which allows us to get the low summer price on most of our requirements without incurring [765] excessive fixed charges on storage.

Propane is obtained mostly from the East Coast oil refineries; we have obtained some from midecontinent suppliers on occasion. We are set up to take delivery either by tank truck or by rail at most of our plants and we maintain storage equal to about two thirds of our winter requirements, filling up during the summer at low prices.

Our fuel requirements for all of the Gas Division companies are pooled for purchasing, which is done by the Service Company, and the large volume makes it possible and attractive for suppliers to make arrangements favorable to us for assuring some winter deliveries that enable us to operate on lower storage capacity of our own. This has been particularly valuable for the smaller companies, which, buying separately, could not hope to obtain this service except at an exorbitant premium.

Q. I show you now a brochure entitled "Description of Production and Distribution Facilities of NEES System Gas Companies". Was this brochure prepared under your supervision? A. Yes.

Q. What does it show? A. It contains a textual description of the production and storage facilities and the distribution systems of each of the NEES system gas companies.
[766] Q. Is the information set forth in this brochure true and accurate? A. Yes.

Mr. Quarles: I offer this brochure as Respondent's Exhibit No. 65.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit 65 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Now I would like to return to the question of NEES system organization in connection with the gas business. Mr. Webster testified that the NEES system Gas Division was created in 1952. Will you describe briefly the condition

of the NEES system gas companies prior to 1952? A. In the years prior to World War II the gas operations showed a modest growth and enjoyed fair earnings. The gas companies made 528 BTU gas at a cost of 30-40 cents per MCF. The house heating market was just beginning, and new business could be taken on at a profit. During the war years, earnings held up fairly well, even though costs started climbing. The five year period 1947-1951, however, was the low point of the gas business in New England. With the removal of price controls after the war, the cost of [767] gas-making oils and coal rose sharply. This raised the cost of gas in the holder from the range of 30-40 cents per MCF pre-war to 60 cents in 1947, 70 cents in 1948. Obviously, with those costs of gas it was no longer possible to sell gas for house heating for 50 cents per MCF. With wages and taxes up too, there was only one thing the gas companies could do—raise their rates drastically. This was done in 1947 and 1948. But the increased rates they had to charge to cover their increased costs, tended to price them out of the competitive market for house heating as well as most commercial and industrial uses, and the gas companies not only stopped growing but began actually to lose customers.

While the rate increases of 1947 and 1948 lifted earnings out of the red where they had been in 1947, it was only a temporary relief. Squeezed between inflationary increases in costs and inability to increase sales, earnings again started to decline, and the gas business was depressed.

Q. What if anything happened to relieve this situation?
A. In 1948, plans started to crystallize to bring natural gas to New England from the Texas Gulf Coast. By the end of 1949 two major pipeline companies, Tennessee Gas Transmission Company and Texas Eastern Transmission Corporation had applications on file with the Federal Power Commission to bring Texas gas to New England. Ten-

nessee [768] proposed to deliver the gas through a wholly-owned subsidiary, Northeastern Gas Transmission Company, and Texas Eastern proposed to make deliveries through Algonquin Gas Transmission Company, a company to be owned by Eastern Gas and Fuel Associates, New England Gas and Electric Association, and Texas Eastern. Hearings started before the Federal Power Commission in the spring of 1950 on the applications of both companies.

NEES backed the Tennessee application because it was believed that Tennessee would get natural gas into New England more quickly and because Tennessee proposed to serve a wider area in New England.

After a bitter fight, the Commission decided the case by splitting the market between the two applicants. Tennessee-Northeastern obtained a certificate late in 1950 and Texas Eastern-Algonquin finally obtained its certificate in 1953. All of the Massachusetts gas operations of NEES, except Norwood Gas Company, received their gas supply from Tennessee-Northeastern.

Q. What did the coming of natural gas mean to the New England gas companies generally? A. The coming of natural gas to New England was not in itself the salvation of the New England gas companies. It gave them a supply of gas in their holders at about half of the cost of manufactured gas, but this particular [769] saving was just about offset by the fixed charges on capital investments for gate stations, pipelines to bring the gas to distribution centers, and peak-shaving or standby production plants; the amortization of the cost of converting the myriad of customers' appliances from manufactured to natural gas; and the heavy maintenance necessary to control leakage of dry natural gas from mains that had been distributing wet manufactured gas. Therefore, if there had been no change in sales the conversion to natural gas would have just about paid for itself.

Natural gas did, however, give the gas companies a "hunting license". The lower cost of gas made it a product that could be sold at a profit to a greatly expanded market, and it was cleaner and more uniform in quality. Natural gas at 1,000 Btu per cubic foot in effect nearly doubled the capacity of the distribution systems as compared with the heat units they could distribute in the form of manufactured gas at 528 Btu per cubic foot.

Q. What particular problems were involved in the change-over from manufactured gas to natural gas, besides those arising from the need and opportunity to expand sales?
A. First, there was the problem of conversion of customers' appliances from the old Btu gas over to the new level which required an adjustment of every gas burner on our system.

[770] Another major management problem resulted from the reduction in production personnel caused by the closing down of gas plants.

There were in the plants of our companies about 230 employees in production departments and steps were taken in advance of the closing of plants to insure that employees would be continued in work in other departments without layoffs.

For almost a year only temporary help was employed in those jobs in distribution, service, office and utilization that might be filled by production employees. Other new jobs also became available in the system as a direct result of the changeover, and where possible these new positions were reserved for displaced production personnel.

Furthermore, our association with the electric companies helped in that 27 of these employees were absorbed by the electric side of the business. As a result of careful, long-range planning, cooperation with the unions, particularly where seniority was involved, and expanded activities in other departments, the 230 production employees were

either placed in other departments or retained in the plants with no individual being required to sever employment.

Q. How did the coming of natural gas bear on NEES and its decision to organize the Gas Division? A. It was obvious under the circumstances I have [771] related, and with the many other problems peculiar to the gas business, particularly with the advent of natural gas, that the best interests of both the NEES stockholders and gas customers would be served by concentrating in one group the sole responsibility for gas operations.

It was therefore decided to establish a separate gas management organization within the NEES system right from the local companies up to a central organization to handle problems common to the several gas companies. To the extent that there were substantial savings in joint use of buildings, customer accounting, general accounting and other activities, joint operation with electric was maintained. But system planning, engineering, negotiation for gas purchases, and other problems of the gas business, and especially all activities relating to sales promotion, were to be turned over to a new organization whose sole responsibility would be for gas. The Gas Division was established in March 1952, consisting of management and engineering personnel, with an office of its own at Malden. Furthermore local management of gas and electric operations was separated, each gas company being assigned a local manager whose sole responsibility was for gas.

Q. Now, Mr. Dalbeck, I want to turn to the organization of the Gas Division, at Gas Division headquarters at Malden. You are the chief officer there? [772] A. Yes.

Q. And what is your official title? A. I am the president of all the NEES system gas companies.

Q. Who pays your salary? A. Each company pays a portion of my total salary.

Q. Who are the key personnel in Gas Division head-

quarters who report to you? A. The Gas Division headquarters staff is divided functionally into four general areas of responsibility; management, marketing and supply, operations and merchandising. The key people reporting to me are the four people in direct charge of these areas.

Q. Please describe the duties of the assistant in charge of management? A. One Assistant to the President performs management functions. He is the responsible executive in my absence. He also works closely with individual company managers and superintendents on matters of common policy to the Gas Division such as employee education and personnel organization, public relations, gas appliance approval and selection, municipal tax and legislative matters, real estate and property problems, and inventory controls.

Q. Who is in charge of marketing and supply? A. Another Assistant to the President. He works with [773] gas company managers on matters concerning sales estimates, earnings estimates, rate matters, new business expense budgets, new markets for gas, general statistics, and builder and dealer sales activities. He also assists the company managers in commercial and industrial sales and advises them on special contracts for industrial gas sales for both firm and interruptible gas. He represents the local Gas Division companies on matters involving gas purchased from pipeline companies, negotiations with these pipeline companies, and the handling of both certificate and rate phases of gas supply before the Federal Power Commission. He also represents the gas companies on rate matters before the Massachusetts Department of Public Utilities. He serves on industry committees having to do with supply matters throughout the entire New England area.

Q. Who is in direct charge of operations? A. An As-

sistant to the President for operations. His functions include gas production, distribution, utilization, engineering, and construction. He works very closely with the company managers on the preparation of capital budgets, on the acquisition and training of operating personnel, on controlling operating costs and in the labor relations field. He continually assists the company managers and superintendents on all operating matters, policies, procedures, safety methods and training. He, or members of [774] his group, represent the gas companies on industry committees working with the Department of Public Utilities and other state agencies on matters relating to gas operations, such as the establishment of safety regulations. He also supervises two engineering groups headed by a Coordinating Engineer and a Gas Engineer.

Q. Who is in direct charge of the fourth area that you mentioned, merchandising? A. The Sales Promotion Manager. He works very closely with our outside advertising agency used by all of the Gas Division companies in developing advertising and market research programs and layouts to support the promotional sales activities of the local companies. He works with the company managers and sales managers in determining appliance sales quotas, sales campaigns, salesmen bonus plans, and all local promotion activities. He develops overall Gas Division promotional and advertising expense budgets and is responsible for the preparation and publication of Gas Division appliance sales statistics. He also works with non-affiliated gas companies in the New England area for the promotion of the use of gas throughout the region, and he serves on committees formed for this purpose.

Q. Who pays these persons' salaries? A. All Gas Division personnel are part-time employees of each of the Gas Division companies.

[775-8] Q. You said the Assistant to the President for

operations supervised the groups headed by a Coordinating Engineer and a Gas Engineer. What does the Coordinating Engineer do? A. The Coordinating Engineer is responsible for production and distribution operating procedures. He investigates new gas production processes and advises on their use in any of the Gas Division companies. He also investigates new distribution materials and techniques and discusses them with company managers and superintendents. He assists in the preparation of capital budgets and makes studies for the local managers of their operating and maintenance costs. He also supervises the work of the planning, production, distribution and utilization engineers.

Q. What is the function of the Planning Engineer? A. The Planning Engineer studies continuously the distribution system in each of the local Gas Division companies. This Planning Engineer has a McIlroy Fluid Network Analyzer available to him at Tufts University in Medford, Massachusetts, which helps him to advise local company managers and superintendents as to what additions or changes should be made to their distribution systems in order to insure an adequate gas supply to customers. Planning further requires developing long-range studies of population trends, customers, and gas load as they relate [779] to the distribution system capacity requirements in each local company. These studies are invaluable to local managers and superintendents to insure that each company's distribution system will be adequate to handle future gas loads and that additional distribution capacity will be installed at the right time in the most economical manner.

Q. What does the Production Engineer do? A. He serves as an advisor to production superintendents in each of the local companies. He determines peak-shaving levels which are the basis on which local production plants are operated

and natural gas is contracted for. An important function of his is to be certain that all gas production plants after being shut down all summer and the fall are in good operating condition for winter production and that production personnel are well trained. He makes continuous studies of new production materials and methods, and passes this information along to the superintendents. In addition, he is able to coordinate the purchase of gas-making fuels for all of the companies, resulting in economies due to bulk purchasing.

Q. What is the function of the Distribution Engineer?
A. The Distribution Engineer assists the local company superintendents in gas leakage surveys and methods of leakage control. He investigates leakage survey companies and recommends their use to local managers. Also, he keeps [780] abreast of leakage control techniques and makes studies as to the feasibility of their use, and assists the distribution departments of the local companies by investigating new distribution materials and tools; and recommends which would be the most beneficial. He maintains records of gas pipe inventory in each local company and recommends to the company superintendents the level of inventory which should be maintained.

In addition, he coordinates the purchase of pipe by all companies, which results in economies through bulk purchasing. Also, he studies and advises with respect to procedures for mapping of distribution systems.

Q. What are the duties of the Utilization Engineer?
A. He operates a servicemen's training school in Malden where he conducts classes on a regular scheduled basis for servicemen of each of the local companies. He is chairman of a committee of utilization superintendents which tests all new gas appliances to be sold and passes on their technical qualities. All appliances which are purchased by Gas Division local companies first must be ap-

proved for safety and quality by this Committee. He experiments with new testing equipment and appliance service tools and is able to advise each utilization superintendent as to their usefulness to the local servicemen. One of the most important functions of the Utilization Engineer is the study [781] of local plumbing and building regulations in each company area, and advising the local utilization superintendents as to the procedures which must be followed in order to comply with these local regulations.

Q. You also mentioned a Gas Engineer reporting to the Assistant to the President for Operations. What are his duties? A. He has a staff of engineering personnel under his supervision who work for the local gas companies upon request in a manner similar to the engineering groups provided by the Service Company for local electric companies. These engineers design, engineer, and handle the construction of major feeder mains, regulator stations, buildings, L. P. Air Plants and additions thereto and all major construction which are beyond the capabilities of the local companies to handle. These engineering personnel also provide service upon request to the local companies in arranging for and scheduling maintenance on gas storage holders. They also are present in the starting up and testing of production facilities each fall. They provide expert testing and maintenance service on gas instruments and telemetering equipment at this time.

Q. I show you now a map entitled "New England Electric System Gas Companies—showing principal offices and lines of management responsibility with representative travel time to division and central headquarters." What does this show? [782] A. This map shows the proximity of each local company's office to the Malden Gas Division office. The Gas Division Headquarters office in Malden is seven miles from NEES System central office in Boston or about a 25 minute drive. Seven miles northeast of the

Gas Division Headquarters, a 25 minute drive, is the central office of the Lynn Gas Company, whose area is adjacent to the Mystic Valley Gas Company area. Eleven miles northeast of the Gas Division Headquarters is the main office of the North Shore Gas Company in Salem, a 35 minute drive. Twenty miles north of Gas Division Headquarters is the central office of the Lawrence Gas Company located in Lawrence, Massachusetts, a 40-minute drive. The Norwood Gas Company's main office is located seventeen and one-half miles south of the Gas Division office in Malden and is about a one hour drive.

Thirty-six miles west of Gas Division Headquarters is the main office of the Wachusett Gas Company located in Leominster, one and one-quarter hours from Malden. The Central Massachusetts Gas Company's main office is located in Webster, which is a one and one-half hour drive, or forty-eight miles, from Gas Division Headquarters in Malden. The Northampton Gas Light Company is located eighty miles west of Gas Division Headquarters, but this is still only a two and one-half hour drive.

Q. Was this map prepared under your supervision?
[783] A. Yes.

Q. Does it accurately set forth the information it purports to show? A. Yes.

Mr. Quarles: I offer this map as Respondent's Exhibit No. 66.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit No. 66 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Do you consider that the area served by these companies is so large as to impair efficient operation? A. I do not. Considering first our four large companies, the area they serve is about 75 percent of the size of the area served

by the Boston Gas Company. Considering all of our companies, the so-called Tenney Group manage companies from their office in Boston that are much farther from their office than ours. For instance, Springfield Gas is about the same distance from Boston as is Northampton. To the south, Brockton Taunton Gas is farther away than Norwood and, to the west, Fitchburg Gas and Electric is beyond Wachusett. To the north, they manage companies above Lawrence Gas in New Hampshire.

[784] I can leave my home in the morning, go to our farthest company, which is Northampton, transact such business as I need to and return after lunch, being in my office by mid-afternoon. None of our managers need be away from their office a full day to spend time in our Division office in Malden.

As a result of being able to reach any of our companies within a reasonable driving time, efficiency of operation is obtained through the ability of our whole organization to effectively service and advise on any problem that may arise in a local company.

Q. Now I want to turn to the organization of each of these local gas companies. You said you are the president of each company, and I understand that Mr. Hanson in Boston is the treasurer of each company except Lynn. Who is the top executive located in each local company office? A. Each company has a vice president and general manager who is in immediate charge of the company and its office.

Q. To whom does he report? A. He reports to me as president of the company.

Q. How are the local companies organized? A. Each company is organized by departments reporting to this vice president-manager, including a production department, a distribution department, a utilization department and [785-6] a sales department. The treasury department

is part of a NEES System Treasury Organization, which handles gas and electric treasury operations jointly.

Q. What are the overall responsibilities of the vice president-manager of each company? A. The vice president-manager has direct responsibility for the production, distribution, utilization, merchandising, sales and public relations activities of his company. He also consults with the treasury representatives who serve his company on treasury and accounting problems and they work out their problems together.

Q. What are the functions of a production department in a local company? A. The responsibility for providing an adequate day-to-day supply of gas in each company falls to the company's production department. The production department is concerned with taking gas from the pipeline, manufacturing gas when required, and storing gas until it actually enters the distribution system. A superintendent generally heads up the production department in Gas Division companies. The overall planning and operations concerned with the purchasing, metering of purchase, manufacture, and storage of gas is the responsibility of the superintendent in charge of the production department.

Q. What are the functions of a distribution department? [787] A. A distribution department has responsibility for a company's distribution system by which it delivers gas from its purchase, manufacturing and storage facilities to its customers. The distribution system consists of underground gas mains, gas services and related equipment. A considerable amount of engineering must be applied to this distribution system, in order that it be maintained in first class condition and that it be continuously expanded to handle growing gas loads.

Now, the distribution department must plan and build distribution facilities for new load, in new and old areas, inspect and maintain the present system and keep track

of pressures throughout the system in order to catch and correct malfunctioning or overloading.

Q. Who is in charge of a distribution department?
A. A superintendent is responsible for the proper operation of the distribution department. In small companies he may have other responsibilities as well. This superintendent generally has technical personnel assisting him and calls on the Gas Division on involved engineering or operational problems.

Q. What functions in a gas company's operations are performed by the utilization department? A. The installation and maintenance of proper metering facilities and of customer gas appliances is the responsibility [788] of the utilization department. This department is sometimes called the service department.

Q. What do you mean by proper metering facilities?
A. Gas meters vary in size according to the amount of gas which must pass through them and be measured in order to serve a customer's needs. The utilization department is responsible for the proper sizing and installation of these gas meters. State laws require that gas meters will be replaced and tested on a regular schedule. This continual meter test program is a part of the function of a utilization department.

Q. What takes most of the time of a utilization department? A. The major portion of the work that is done by the utilization department consists of servicing customers' appliances. Although gas appliances are relatively trouble-free, service on them is required from time to time and occasionally parts must be replaced. Utilization department personnel are trained in the servicing of all types of gas appliances and equipped with vehicles and tools in order to handle all types of service problems. Facilities are maintained by the utilization department through which calls requesting service are received and dispatched.

Adequate stocks of repair parts and supplies are ordered by the utilization department.

[789] Q. Who is in charge of utilization department?

A. A superintendent of the department in the larger companies, or the general superintendent in the small companies.

Q. Who is in charge of a local company sales department? A. Generally a sales manager. In the smaller companies the vice president and manager himself acts as sales manager. In every company, sales is a very major concern of the vice president and manager even though a sales manager may have direct responsibility for the department.

Q. What generally does a sales department do? A. The domestic sales department in each of the NEES gas companies is actively engaged in selling and promoting domestic gas appliances. The purpose of these appliance sales is primarily to build gas load rather than to make a merchandising profit. Commercial and industrial customers and prospects are approached by company sales representatives promoting the use of gas. We do not sell them appliances but we do work with them and manufacturers' representatives to engineer installation of gas consuming devices. Each gas company also has personnel who maintain relations with appliance dealers to encourage sales of appliances by them which also helps to add gas load to a company's sales.

Sales training courses for personnel, incentive pay plans, advertising in newspapers, on television and radio and home service activities are all part of the [790] overall sales promotion efforts of a local gas company. Sales stores are maintained by each company where appliances are displayed and demonstrated. Continuous active work in the sales field is a tremendously important phase of each company's activity.

Q. Mr. Dalbeck, you explained what each of the various departments in the gas companies do. Can you describe briefly the organizational relationship between them?

A. The various departments which make up the whole of my NEES affiliated gas company are generally supervised by department heads. The personnel of these departments answer to these department heads. The overall responsibility of these various departments, however, falls to the vice president-general manager of each company who reports to me as president of the company.

I am responsible to the Boards of Directors of each company, and to the NEES System Vice President for management. The day-to-day decisions in the operation of each of the departments of the gas company are made by department heads. They, however, keep the manager informed of their activities and rely on him for advice and guidance in the performance of their supervisory duties. He, in turn, consults with Gas Division headquarters when he feels that he needs help from higher authority. Of course, as has been indicated before, the purpose is to operate these [791] companies as efficiently as possible, not to follow an organization chart for its own sake, and there is a lot of consulting and advising which does not and should not follow formal lines.

For example, my assistants at the Gas Division headquarters receive lots of calls for advice or assistance which do not come through me.

Frequently department superintendents will seek technical advice from Gas Division headquarters, and there is no rigid requirement that they go through their vice president-general manager, or through me, except where good judgment indicates they have a problem of which we should be made aware.

Furthermore, the same sort of thing is true in our relationship with NEES system headquarters in Boston,

particularly with respect to service company contacts. Where it will be the most efficient thing to do, any of my assistants in Malden, or the managers or other personnel of any of the local companies call Boston directly for advice or assistance. The organization chart, or any description of the organization, shows clearly the formal vertical lines of authority that exist, but fails completely to depict or suggest the multiplicity of cooperative contacts between people at all levels which is governed by the daily judgment of individual people.

[792] Q. You mentioned service company contacts, Mr. Dalbeck. I think this would be a good time for you to summarize New England Power Service Company's services for the gas companies. What, in summary, are those services? A. I think I can answer that question best by referring back to Respondent's Exhibit No. 53, the NEES system functional organization chart. As you will recall, the service company functions are represented on this chart by boxes just above the middle of the chart reporting directly to system vice-presidents.

Q. All right, starting at the left this time on that exhibit, which boxes indicate services performed for the gas companies? A. We make no use of the services under the vice-president for system planning, and comparatively little use of the people under the vice-president for electric engineering and operations, except for purchasing, since most engineering is done by people on the Gas Division Staff at Malden. This arrangement is natural since gas and electric engineering involve very different problems, and it is most efficient to maintain separate staffs for these functions. However, we do call upon the service company engineers for such things as right of way negotiations, tax valuations, drafting and photostating, which are not peculiarly related to the electric business; and for help in maintenance on [793] holders and other gas maintenance

and installation of electric components, in new telemetering and L. P. Air gas installations.

Q. What does the Purchasing Department do for the gas companies? A. All purchasing except local or emergency purchasing is actually done by the service company. This includes all fuels, appliances, pipe and fittings, equipment and all other materials used by the gas companies.

Q. Coming to the blocks under vice-president and treasurer, these represent more service company functions, do they not? A. Yes, sir.

Q. What about the blocks from Central Region Treasury Representative down? A. These are the District Treasury Organizations. They handle all the day-to-day treasury and accounting functions for the gas companies. However, that is apart from the Service Company.

Q. What in summary are the functions performed for the gas companies by Service Company personnel in the treasury area? A. Officers and employees of the Service Company are requested to supervise the local accounting departments, prepare statistical reports of all kinds, review or prepare and file necessary reports with all regulatory bodies, including the Securities and Exchange Commission, the Federal [794] Power Commission, and the Department of Public Utilities and prepare statistical data for trade associations and investment services.

The internal auditors, who make the annual audit, are available for other special assignments. The Systems and Methods Department which is constantly working on new and improved procedures and which supervises changes in accounting systems as they are made, is another phase of the Service Company operations important to the gas companies.

The Tax Department handles all tax matters for the gas companies, and this includes state franchise and federal income, social security, withholding and all other taxes.

The Insurance Department handles all insurance matters, including property, workmen's compensation and public liability, transportation, boilers, group and pension plans insurance. While the Tax Department handles social security from the point of view of liability of the companies to pay, the Insurance Department concerns itself with the employee angle, such as interpretation, death claims, filings at retirement, and so forth.

The Insurance Department reviews the companies' insurance policies and property changes to determine the best insurance in the light of changing situations, both in the companies and in the field of new insurance [795] availability. The Service Company, at our request, also supervises all property accounting, reviews reports of fixed capital prior to filing, and represents the companies in studies and investigations by the Department of Public Utilities of plant and property.

Q. Moving over now to the blocks under the vice president for management, I believe you said you had contacts with the Service Company under each of these blocks except the top two, "Electric Sales Promotion" and "Distribution Coordination". What does the Service Company do for the gas companies in connection with rates? A. The Gas Division and the gas companies work very closely with the Rate Department of the Service Company. Although our Assistant to the President in charge of marketing has overall jurisdiction of rates in the gas companies, because of his many other duties, we have to request the Rate Department of the Service Company to handle many of the details affecting our rates and rate changes.

Furthermore, the Service Company has experts who constantly review rates in relation to other companies, provide us with comparisons with other companies in the form of statements and schedules, do all of the work of revising rates, of testifying on rates before the Department

of Public Utilities and of maintaining continuous contact with the Department of Public Utilities staff on rate matters.

[796] Q. What services do you call upon the Service Company for in connection with labor relations? A. Here again, although the Assistant to the President in Charge of operations is responsible for labor matters, the time that he can spend makes it impossible for him or anyone else in a gas company to become thoroughly familiar with all the ramifications of labor law and its relation to our employees.

Accordingly, we call on the Labor Department constantly for advice and help where in our dealings with employees our union contracts may be affected. The Labor Relations counsel advises and consults with the negotiating committee during contract negotiations, and prepares and reviews all labor contracts. He also represents any gas company involved in arbitration proceedings or grievance procedures that cannot be settled at the local level.

Q. Describe the services rendered under Personnel? A. The Personnel Department works closely with the gas companies, particularly in the area of employee recruitment, placement, training and transfer. We consult with them constantly when we require new men at the supervisory level and their advice and the aptitude testing that they supervise enable us to place and advance our employees properly in the best interest of the company and the employee.

Q. Will you describe the medical services requested by [797] and performed for the gas companies? A. All new employees are subject to physical examination, and while this is done in our outlying companies by local doctors, we request the NEPSCO Medical Department to review all examinations. On a company close to Boston, such as Mystic Valley, they do the examination. In those companies

that provide part time in-plant nursing service, the Medical Department supervises and standardizes procedures. The medical staff makes periodic visits to each company and at that time reviews any use or examines any employee referred to them by management. They also will interview and examine at the Service Company office, upon request of the manager, an employee who desires a checkup. They maintain complete records of all employees with a history of lost time due to illness and perform many other requested services that are of benefit to employee welfare and company health records.

Q. What services do you render under safety? A. The Service Company safety group is of tremendous benefit to our companies and to our employees in its dedication to improving accident experience. Our safety record in comparison with other gas utilities is evidence of its effectiveness, and its safety meeting, its safety campaigns, its constant search for new ideas and new safety equipment reflect favorably on our whole organization. We [798] have won many safety awards over the past few years, both national and statewide, and our employees are indeed grateful for the assistance of the Safety Department in the attainment of our safety record.

Q. Moving over to the boy's office, what sort of services does the vice president and general counsel, what sort of services to the gas companies does he represent? A. We call upon the lawyers in the Service Company Corporate Department, who have been appointed by the gas company directors as counsel for the general companies, in almost every phase of our operations.

They advise us on day-to-day legal matters in connection with our problems with customers, employees, and municipal and state authorities. They are continually studying new legislation and rulings of regulatory authorities to keep us advised of changes that may affect our daily work.

They prepare all legal filings with local, state and federal bodies and represent our companies in all cases before these bodies. They advise us and prepare special contracts when required, and there is no legal problem that arises in our companies that is not discussed with some one of them.

Q. What services are performed under the heading of Publications? A. The monthly magazine "Contact" is distributed to all our employees, and this is a product of the Service [799] Company. The NEES Daily News Digest is a summary of any news affecting public utilities, appearing in daily papers through our territory and New York. Items of interest appearing in this digest are available to us as they appeared in the papers, since the Publications Department maintains a complete file of clippings.

Q. Does this department also assist you in public relations? A. Very definitely. However, when a problem of this nature arises, we usually confer with the NEES Vice President in charge of public relations, and he will assign someone in this department to work with us.

Q. Are all of these services essential? A. Very definitely.

Q. In your opinion, are the billings from the Service Company a fair measure of the value of the services rendered to the gas companies? A. No, sir. First of all, the billings are at cost and therefore do not reflect the charges we would have to pay for such services if we had to go outside for them. Secondly, the billings in no way reflect the value to the gas companies of having a reservoir of specialists on hand for instant service at cost or for brief questions and answers which if put to outsiders not familiar with our gas operations would involve time to research and increase [800] billings.

Q. Were it not for the Service Company, would you have been able to operate your gas companies with the executives and employees you now have? A. Definitely not. By being able to draw on the Service Company we have been able

to keep our executives and employees to a number far below what we would need if the Service Company was not available to us.

Q. Could any of these services be performed by either the Gas Division or the gas companies? A. It would not be possible for us to perform these services without substantially increasing our present personnel. Even then, there are many services performed by the Service Company that could not be afforded either by a gas group organization or by independent gas companies. This is so because the gas companies enjoy the benefit of being a part of the large NEES organization which, although predominantly electric, does give to the gas companies many benefits not possible in a smaller operation.

Q. Are the executive and administrative services of NEES System top management personnel requested of the Service Company and billed to the gas companies? A. Yes. At the beginning of this year we requested the Service Company to provide for us the services of top system executives, as permitted by the Order of this [801] Commission, dated December 30, 1959.

Mr. Quarles: Mr. Hearing Officer, this brings us to the end of one phase of my examination of this witness, and since it is now four minutes of five, it might be appropriate to adjourn until tomorrow morning.

Hearing Examiner Ewell: All right. Is 10:00 o'clock tomorrow morning satisfactory to everybody?

If so, we will resume at 10:00 o'clock tomorrow morning.

(Whereupon, at 4:56 o'clock p.m., the hearing was adjourned to Thursday, May 19, 1960, at 10:00 o'clock a.m.)

[803]

PROCEEDINGS**Hearing Examiner Ewell:** We will resume.

Whereupon,

HAROLD L. DALBECK

resumed the stand and testified further as follows:

Direct Examination (Resumed)

By Mr. Quarles:

Q. Now turning from the Service Company back to the local organizations, Mr. Dalbeck, can you summarize the relationship between gas and electric companies locally in areas where NEES has both kinds of operations? A. The Treasury functions are the most important instance of combined operation. Treasury represents the one area where gas and electric companies have common officers. Functionally, accounting personnel are all part of a single organization performing functions for both gas and electric companies.

The closest combination of activities is in the customer accounting field. The same meter readers read both gas and electric meters at a location on one stop. The remainder of the customer accounting operation from the processing of the meter books right through to the preparation and mailing of the customers' bills is handled on a combined basis thus saving time and increasing the efficiency of the entire operation. General accounting [804] functions are also combined. People who work on gas company general books usually are different from those who work on those of electric companies, but most accessory functions from office messengers to overall supervision of Treasury departments are combined. The same is true in the plant accounting and payroll areas. Office maintenance personnel such as janitors, also work on a combined basis and are usually members of Treasury departments.

Q. Are there other treasury functions besides accounting performed locally? A. Yes. In smaller companies, where the amount of stockroom space required is not large, stores functions are combined between affiliate gas and electric companies. Ledger clerks and stockroom personnel work for both companies. In larger companies, however, available stores buildings generally are not large enough for combined stockroom operations and separate gas and electric stores departments are established. Also, customer relations and cashiering personnel work on a combined basis. Customers enter our stores and pay both gas and electric bills to the same person. If they have questions concerning their bills or service they talk to customer relations clerks who answer questions concerning both gas and electricity.

Q. What functions other than Treasury are performed on a combined basis? [805] A. Some Utilization Department operations are combined. It would be uneconomical to train the large numbers of servicemen we have to service both gas and electric appliances, but there are several utilization department jobs which are done more efficiently and economically on a combined basis. Joint service centers where request for service calls are received, records kept, and service orders dispatched exist in several of our companies. Radio dispatching equipment is used by both companies and operated by personnel working jointly for both in some of our companies. Gas and electric service calls received outside of normal working hours are handled on a combined basis by either electric substation or gas personnel, in addition to their other duties.

Q. Are there more areas of combined operations? A. There are many. Practically all community and public relations efforts are combined in communities where affiliate gas and electric companies have franchises. Gas and elec-

tric company managers are continually conferring with each other and taking joint action in this field.

Also, labor and personnel problems are combined. The same unions represent both gas and electric employees. Local grievances which affect both companies in an area are often discussed by both managers and settled between them. There is a wide variety of contacts which do not show on our organization chart but are governed by practical day-to-day judgment as to [806] how gas and electric company personnel can draw on one another for help and assistance.

Q. Mr. Daibekc, so far, in my questions and in your answers, we have approached the NEES gas business pretty much from an organizational point of view. We have both referred from time to time to the system organization chart and you have described the organization of the Gas Division and of individual gas companies.

You indicated that this sort of approach fails to reflect the many direct contacts across organizational lines which characterize operation of the gas business.

I would like now to try to approach the business from a different point of view, putting formal organization as much as possible in the background, so that we can get at this variety of contact which you say actually occurs.

For this purpose, can you state what are your major areas of concern; that is, what major general problems you and your fellow personnel regularly deal with in order to keep the business going? A. Well, first of all, I would say that there are the technical problems of providing gas service; that is, the problems related to the purchasing of gas, producing gas for peak-shaving, maintaining the distribution systems in condition to distribute gas to our customers' homes or establishments, and keeping their appliances in order to [807] utilize the gas satisfactorily. This has two aspects in that it involves, on the one hand,

the current operation and maintenance of our production and distribution plant and, on the other hand, the planning and construction of new plant as required both for replacement and to meet and take care of load growth as it occurs.

A second major area, which bears closely on the planning aspects of the first area, has to do with what you might call the economics of the business. While ours is a utility business in every respect, it varies from others such as telephone or electric utilities in that it is highly competitive against nonregulated industries. We have no monopoly since there is no use for gas that cannot be replaced by some other fuel. Therefore, we have to perform either better or at lower cost than our competitors in order to stay in business.

This area of economics involves on the one side the whole problem of supply, whether by pipeline or production, from the point of view of cost, and on the other side the question of promotion. In addition to these two major areas which relate particularly to the gas business, there are the managerial problems which have to be taken care of in addition to these principal areas.

These problems are not confined to the gas business but are common in running any business, and certainly the [808] public utility business. These include financing, purchasing, keeping accounts, paying taxes, maintaining good labor relations, customer and community relations, maintaining contact with local regulatory authorities and so on.

Q. All right, tell us a little more about what you have called the technical problems of providing service. Thinking first about the day-to-day aspects of these problems, who primarily is concerned with them or in charge?

A. As far as day-to-day operations are concerned, these are handled principally at the local level, and as long as no major problems develop they are handled by the super-

intendents and the local company personnel under them; that is, the superintendent of production, distribution and utilization.

As soon as any major problem develops it is reported to the vice-president and general manager. As the individual in immediate charge of the company's operations, he must keep informed of all sorts of problems, and his judgment enters into any decision as to how to handle them. Technical assistance in this area comes initially at least from the gas division staff at Malden.

Q. What kinds of things have to be done in the day-to-day performance of these technical functions? Take first the problems of the production superintendent. A. You will recall from our discussion of natural [809] gas supply contracts that we find it economical to make some of our gas on cold days. In cold weather the production superintendent watches gas purchases from the pipeline company very closely in order not to exceed the most economic purchase demand. It is his decision whether he will make preparations to manufacture gas for peak-shaving purposes on any given day. He generally consults with the manager concerning the manufacture of gas, and the decision is usually a joint one between the manager and the superintendent. He is in charge of the actual operation of natural gas receiving stations where metering must be carefully checked, of gas storage holders and of the gas plants. The local company staff is generally sufficient in size and skill to handle these functions.

Q. What are some of the special problems on which a local company may call for help from gas division headquarters? A. Well, for example, it is customary for each company to make training runs on its gas manufacturing equipment prior to the advent of cold weather each year. The gas division engineers advise and work with the local superintendent as requested in these training runs. They

check the operation of the gas-making equipment and the recording and controlling instruments, and provide instrument maintenance service where necessary. This sort of [810] testing only needs to be done periodically and is an instance of gas division personnel with their wide experience being available for these special jobs when the need occurs.

The receiving of purchased gas is a production function, and the superintendent watches the actual purchases at receiving stations, but general relations with suppliers and the making of contracts are handled at gas division headquarters. This is logical because all our natural gas except at Norwood is purchased from one supplier under one filed tariff, and the interests and problems of the several companies in this connection are very similar.

Negotiations and Federal Power Commission proceedings take a great deal of time, and this would be a major burden on each gas company if it had to do for itself what one man at gas division headquarters does for them as a group.

Q. Are there other functions on which the production superintendent regularly receives help from outside his local company? A. Yes. Part of the production function is the storage of gas in storage holders before it enters a company's distribution system. NEPSCO has a holder maintenance crew which performs the major part of the maintenance work on storage holders. The purchasing department of the service company performs an important function for the production department in purchasing all of the propane and other gas-making [811] fuels required for gas production.

Q. What generally does the superintendent in charge of distribution do? A. He supervises the day-to-day operation and maintenance of the distribution system, including the laying and repairs to mains and services and the

maintenance of regulators. He is also responsible for leakage surveys, for pressure regulation, for pressure surveys and for determining the necessity and timing of new facilities to adequately meet increasing loads.

When it comes to actually designing or constructing major additions, or economically handling unusual maintenance problems, the distribution superintendent draws on gas division engineers and outside contractors for assistance, although the responsibility for the adequacy of his company's distribution system remains squarely on his shoulders.

Q. Can you describe some particular problems that the distribution superintendents have had to cope with in recent years? A. Well, as I indicated in talking about the advent of natural gas in New England, the effect of its high BTU content was to virtually double the capacity of our distribution systems. Added load, due to successful sales promotion, absorbed that extra capacity in many areas within [812] 3 years of the coming of natural gas, and at that point we had to increase distribution capacity in order to keep up with our load growth. How to expand distribution capacity was an exceedingly complex problem.

Q. Well, was this a problem particularly of the local distribution superintendents or was it a headquarters problem? A. Both. It was a problem which in general terms was shared by the several companies and required the engineering capabilities of the gas division staff.

On the other hand, it was not something that had a common solution since each company's particular problems were peculiar to its territory, history, its future and other circumstances and conditions. Therefore, this problem, like most, has required close cooperation and teamwork between the gas division staff and individual company distribution superintendents, and of course the company general managers and myself.

Q. Describe generally what action was taken to solve these problems. A. A careful study and a review by top management recognized the need for undertaking an intelligent program of adding capacity to old mains and providing new ones where needed. Such a program included an analysis of the existing distribution systems, as well as a long-range plan [813] to indicate what the future systems should consist of. Otherwise, sizable expenditures might be made in the construction of improperly sized or incorrectly located facilities. Comprehensive studies were made of population trends, movements to suburban and rural areas, residential building, growth of the commercial and industrial load, and industry's migration to industrial parks.

From these studies there was developed what we called a master plan projecting our load growth and the related distribution network requirements for a 20-year period. This serves as a guide for expansion and it is supplemented by continuing field pressure surveys during the winter months when demands are at their peak.

The use of a McIlroy fluid network analyzer, available to our gas companies at Tufts University about 2 miles from gas division headquarters, makes possible highly accurate studies of long-range distribution system requirements very quickly.

Chronological schedules of improvements and additions to the high, medium and low pressure systems, capital investment required and the net revenue produced were estimated and projected over the years of the plan. This foresight in planning ahead avoids pressure problems, premature capital expenditures and results in more accurate budgeting of money requirements for future growth. [814] Improvements and additions made as a result of this planning enabled division companies to handle peak day sendouts in 1959 which had increased substantially

from 1951. For example, Wachusett area—482 percent, Northampton area—445 percent, Lawrence area—383 percent, Norwood area—327 percent. These studies and planning are also of great use of course in planning system requirements for production, purchase and storage facilities.

Q. Who does the actual construction on improvements and additions to the distribution system? A. Generally contractors who are the successful bidders do the major construction and laying of mains and NEPSCO usually installs the pressure regulators.

Q. What do the local superintendent and gas division headquarters engineers do on contracted projects? A. The local superintendent is in direct charge of overseeing the work after determination of the major projects to be done. He gets what help he needs, particularly on planning and engineering, from the gas division. In other words, the gas division usually plans and evaluates the requirements, and the superintendent gets the job done.

Q. Does anyone in the NEES system besides the engineers at Malden and the local superintendent play a critical role in projects of this sort? A. Most definitely so, yes.

[815] In the first place, any project of this kind involves continuing managerial evaluation. That is one of the things which I spend a great deal of my time on, as do the local company managers.

We are constantly assessing the cost of these projects, assisted by the engineers' advice as to the advantages of doing them one way or another, such as weighing the short-term advantages of lower cost against an improvement which might be more adequate over a longer period of time.

The engineering function and the executive function are exercised in closest coordination. The local manager discusses these problems regularly with his superintendent,

and, being in Malden, I keep abreast of them largely through contact with my assistant for operations. But the contacts run every way—I talk with the local superintendents, the local manager talks with headquarters engineers, and, of course, the local manager talks frequently and reports regularly to me. Furthermore, of course, I discuss any major project with system top management personnel.

Then there are all the administrative details to be taken care of. Construction of mains, for example, involves financing, legal problems of letting contracts, compliance with municipal requirements in connection with opening up streets, possible easement or right-of-way [816] problems, and problems of customer and community relations in connection with any interruptions of service or other inconveniences caused by our activities.

Some of these problems we handle ourselves, but there are phases where we have to obtain help because we just are not staffed to cover all necessary areas. This is where we call on the service company for assistance, and this allows us to concentrate more fully on the job to be done at the local level.

Q. All right, speaking of production and distribution generally, is it true that, as far as day-to-day operations go, these are primarily taken care of at the local company level? A. In general, yes. These functions, as I have described them, relate to the company's physical properties and its own customers and are therefore the primary concern of local company personnel. The engineers at the gas division exercise a general advisory and reviewing role in connection with all of these functions. Planning and building for future growth is to a great extent the joint concern of the gas division and the local company personnel. Future requirement projections are largely formulated at Malden with the advice of local personnel.

Q. What is the degree of cooperation, interchange or contact between gas and electric personnel in relation [817] to these functions? A. Cooperation between gas and electric personnel exists where it can be of mutual benefit.

Of course, the gas and electric production and distribution facilities are not alike, and the engineering problems are materially different. Therefore, generally the actual technical operating people are not interchangeable. That is why we have an engineering staff of our own at Malden instead of going to the service company for the bulk of our engineering assistance.

However, there is a lot of contact between electric and gas personnel, and cooperation where it saves money.

As long as we are tied in with NEES there are many cases where space which would be useless to one company is utilized by the other, although an outsider's presence would probably not be satisfactory.

Gas production plants with their many buildings and yard areas and electric production and distribution facilities with similar structures are used by both gas and electric companies jointly in the NEES system.

Q. What are some examples of use by one company of space belonging to the other? A. The electric company leases space at the Lawrence Gas Company plant for the storage of transformers, cable and other equipment. In Northampton, a building which [818] originally housed a gas holder has been converted into a stockroom which is used jointly by both the gas company and the Northampton Electric Light Company. This electric company also utilizes gas company yard space and a shed building for the storage of transformers and crossarms and also for training purposes.

In Beverly the North Shore Gas Company and the Merrimack-Essex Electric Company each have adjoining

operating department buildings, surrounded by considerable yard area which is divided and owned by each company. The gas company has a large storage holder in the center of the electric company yard area, and gas piping runs beneath the surface of the electric property.

On the other hand, the electric company has underground electric facilities under gas company property, and leases the former coal shed owned by the gas company for the storage of electric distribution materials and supplies. If we were unaffiliated this sort of intermingling might not be acceptable.

Q. Are there further contacts at the operational level beyond this use of space belonging to the other company?
A. Yes. In some cases there is actual joint use of the same equipment, space or facilities.

Q. Can you give some examples of joint use of equipment? [819] A. Northhampton Gas Light Company and the Northhampton Electric Lighting Company share the use of certain gas and electric distribution equipment. An electric company pole trailer is occasionally utilized by the gas company for transporting pipe. By the same token, the gas company compressor and operator are occasionally used by the electric company distribution department in the placement of poles in ledge or frozen ground. Other companies have similar arrangements.

Q. What does a utilization superintendent do? A. A utilization superintendent's job is largely to keep an adequate force of properly trained servicemen on the job, and parts on hand are available to perform service on customer appliances as required. There is a service center where customers' calls are received and work is dispatched to servicemen.

The utilization superintendent also is in charge of turning service on and off, and meter operations and maintenance. As I previously stated, there is a servicemen's

school at Malden to which each company superintendent sends his men as required.

Q. Are there any areas where particular personnel actually perform services for both gas and electric companies, in the operating departments? [820] A. Yes. In the area of utilization, while the actual gas and electric servicemen are not the same, there is considerable cooperation in the matter of taking service calls, dispatching and commencing and terminating service. A gas serviceman can read in and read out electric meters, and it is usual practice to send one man instead of two to turn on and turn off gas and read in and read out electric service.

Receiving service calls and dispatching servicemen is handled on a joint basis in several companies. Office space is utilized jointly for this purpose and customer service records can be maintained in combined files. Such joint service order centers result in economies in the utilization of space and number of personnel.

Q. Would you give a description of how one of these centers operates? A. The joint service order center of the Suburban Electric Company and the Mystic Valley Gas Company, located in an electric company building on Centre Street in Malden, performs both gas and electric company functions for joint customer areas. This department receives telephone service requests from customers for both gas and electric service. These requests are noted on cards, and gas service requests are teletyped to the gas service department at another location where they are dispatched by radio. [821] Completed service orders, originally teletyped at this joint service order center, are sent back to this department for notation on customer record cards.

Gas company personnel handle all turn-on and turn-off requests received in this center, where the customer is both a gas and electric customer. Electric personnel turn

on and turn off customers who have electric meters only. This joint gas and electric turn-on and turn-off function amounts to approximately 15,000 calls per year by gas company personnel.

Q. Are there other such joint centers? A. Yes; several. Every company except Norwood and North Shore has similar arrangements although the method of operation is different.

Q. Are there other utilization operations besides service centers which are handled jointly? A. Yes. As an example, Lawrence Gas Company and Merrimack-Essex Electric Company orders are handled by a joint meter department located at Methuen Street in Lawrence. Gas servicemen read in and read out electric meters where gas meters are turned on and off at the same location. The meter department foreman is also responsible for the maintenance of all gas and electric meter history records.

Monthly reports of gas meters removed for test [822] are also filed by this meter department foreman. All members of the meter records department are electric company personnel and they perform duties equally for the gas company.

Q. Is any other function performed jointly? A. Yes. The mobile radio transmitters which are installed in each of the gas company and each of the electric company vehicles in Lawrence are owned by each respective company. The main radio transmitter, however, is used by both. This transmitter is owned by the electric company and part of the expense incurred in its operation is charged to the gas company. Other companies also have joint radio facilities in varying degrees.

Q. It seems then that many of the utilization functions of the affiliate gas and electric companies are done jointly. A. I would say that facilities and personnel used in the performance of service work for both gas and electric

affiliates of NEES are used jointly where economies and convenience can be achieved. The extent of these joint operations varies in each company due to geographic location of overlapping service areas of both the affiliated gas and electric companies.

In many areas, gas and electric service to the customer is made available faster and more conveniently [823] through joint service operations.

Q. Are there other important areas of cooperation between gas and electric personnel affecting the operational aspects of the gas business? A. Yes.

One important area of cooperation not only between gas and electric personnel but also between personnel generally throughout the NEES system relates to emergencies. This kind of cooperation is hard to describe in general terms.

All companies have emergency plans, but the emergency when it occurs is apt not to conform with these plans. Whatever the plans may be, the presence of personnel in an affiliated company whom you know and can call on and who are familiar with your territory increases your flexibility.

Despite the keen competition which exists between the gas and electric operations of the NEES system in many areas, there is never any question that in an emergency all of the companies will combine to do whatever is possible to help.

Q. Would you describe an actual emergency that has occurred? A. Yes. During one winter, on the coldest day of the year, the relief holder at the Northampton Gas Company [824] froze and was not operable. Since it was necessary on this day for the company to make peak-shaving gas or pay the penalty of increasing their billing demand considerably, the situation was of an emergency nature. The assistant to the President for Operations dis-

patched gas division headquarters personnel to Northampton in order to assist the local superintendent with his problem. The assistant to the President for Marketing and Supply contacted the lawyers in the service company concerning the provisions of our purchase contract with Tennessee Gas Transmission Company as to emergency gas. He also talked to the Tennessee sales department.

We got no help from Tennessee. So we had to solve our own problem. Accordingly, the gas division engineering group personnel determined that multiple chain falls were necessary in order to raise the holder and remove the ice, and they called on service company personnel to provide and operate this equipment. In addition, they called on the purchasing department of the service company to acquire additional chain falls in a hurry.

In the meantime an emergency method of manufacturing gas was devised by the gas engineering personnel and the affiliate electric company in Northampton assisted by installing an emergency signal system of an alarm and a light by which a gas maker could signal an exhauster [825] operator and thus produce gas through by-passing the relief holder.

This emergency emphasizes the fact that assistance from the service company and affiliated electric companies is of invaluable help during such situations. In almost every emergency the service company is available with construction crews who can cut off or make temporary repairs to mains, provide equipment, purchase supplies, give legal advice concerning disaster procedures, and generally ease the burden of gas division and local company personnel. At the same time, people working for the vice president of NEES for public relations assist by keeping the public informed of our emergency remedial procedures and our progress in restoring service when interrupted.

Q. Have you now described fully the extent of the help the rest of the system and the affiliate companies give to the production, distribution and utilization departments of a NEES gas company? A. By no means. The contracts are many at the operating level, and what I have cited is only one instance.

Q. All right, now let us turn to your second area, that involving the economics of gas supply and marketing. Who is chiefly concerned with problems in this area? A. As I said, for purposes of discussion this area can be divided into questions of supply and sales.

[826] As far as supply goes, the responsibility for this centers in the assistant to the President for Marketing and Supply, but the service company is called upon many times to assist him.

All our companies except Norwood receive their gas from one supplier, and while each company has separate contracts their terms and rates are the same. It is practical and economical to let one person take primary responsibility for this problem for all the companies.

Q. Can you give a brief summary description of what is involved in working on supply problems? A. Purchasing natural gas involves us with our suppliers and the Federal Power Commission in two major ways. One involves the quantity of gas we need, and working with the pipeline in obtaining a certificate of public convenience and necessity. The second involves the rate we pay for the gas. We have unfortunately been involved almost continuously in one rate case after another in which our supplier has been increasing its rates.

We are required by our gas purchase contract to give our suppliers detailed estimates each year for 5 years ahead to enable them to plan their system expansion, and to demonstrate to the Federal Power Commission what their gas requirements and pipeline capacity requirements

will be. We use these estimates as a basis for our exhibits and [827] testimony in support of the pipeline's application.

Basic estimates are prepared by each gas division company under the guidance of the assistant to the President for Marketing and Supply. He then prepares our exhibits and testimony and is the witness for all our companies. This makes for a substantial saving in manpower and expense to the individual companies.

Over the last 5 years we have been almost continuously involved in negotiations with Tennessee particularly involving peak-shaving or storage service gas and their certificate applications in attempting to get approval for these services.

These rate cases, which have involved not only increases in the well-head cost of gas and other costs to the pipeline companies of rendering service but also disputes between pipeline customers in different areas over the sharing of costs, have been very bitter, hard-fought and time consuming. We have had to be represented at numerous conferences with other customers of Tennessee, numerous days at hearings and at conferences with our lawyers and consultants.

Frequently in day-to-day operation of our companies questions arise as to our rights or obligations under the pipeline contracts. These matters are all handled chiefly by the assistant to the President for Marketing and Supply. [828] He consults closely with me on all matters of this sort, and also with our lawyers in the corporate department in NEPSCO who are well versed on the laws, rules and regulations of the Federal Power Commission.

Q. All right, now, how about sales? Whose concern, primarily, is sales? A. Sales promotion is almost everyone's job. It is my most important single concern. It is the most important concern of each company manager. It is the

direct concern of the sales promotion manager at gas division headquarters.

Industrial and commercial customers are also in the area of responsibility of the assistant to the President for Marketing and Supply. Five of the company managers have sales managers assisting them whose sole responsibility is sales promotion. Sales promotion is a team job and it is everyone's concern to do what he can.

Q. Is there an overall coordination of the sales efforts in each of the local companies by gas division headquarters?

A. Yes.

Any situation in which sales decisions made by a company manager could affect other gas division companies is discussed with the gas division staff. An example of this is when a local company manager or sales manager has the opportunity to offer gas service to a contemplated [829] state-aided old age housing project. Any decisions he might make could ultimately affect other gas division companies since such projects are built throughout the state.

Gas division headquarters staff personnel would consult with me and policies for future relations with state authorities concerning such projects would then be formulated.

Q. Is there any cooperation in the matter of sales promotion with affiliate electric companies? A. Not cooperation insofar as sales are concerned. However, stores for the sale of gas and electric appliances occupied by personnel of both companies have been set up. Appliances of all types are displayed under one roof, and customers can go to one location to see both types.

The maintenance, rental fees and other expenses involved in operating sales stores can be shared by each company, thus reducing their costs below those which would exist if the stores were operated at separate locations.

Q. Are these stores a detriment to active competition between the sale of gas and electric appliances? A. No.

Any gas load which can be added is obtained by gas sales personnel regardless of whether or not it is at the expense of an affiliated electric company.

Q. Can you give a specific example of competition [830] between affiliated gas and electric companies in their sales efforts? A. I certainly can.

In 1959 a large old-age housing project was proposed by the City of Everett in Massachusetts. The electric company spent considerable time and staff effort in convincing this local housing authority that an all-electric project was the thing to have, including electrically heated apartments.

A meeting was held between the housing authority and several of the personnel of the electric company's power sales staff and they were assisted by the NEPSCO electric sales staff. Learning this, the gas company formulated a sales approach to counter the electric company's sales efforts, and convinced the local housing board that an all-gas project would be better for them. The result which was most satisfactory to the gas division was that the project was built with all gas cooking, space heating and water heating equipment.

Q. Why is there joint operation of stores in view of this competitive spirit? A. Joint branch stores have been found to be beneficial to the customer and to each company because they provide economical showrooms, cashiers to receive payments of bills, and coverage of the store with a minimum of [831] personnel.

Joint stores enable a customer to shop more conveniently and make direct comparisons. Furthermore this joint store operation in a very real way promotes competition since the customer is exposed to both gas and electric appliances and salesmen.

Q. Does the NEES central organization supervise any of the gas company sales activities? A. No, sir.

Q. Aside from this area of joint stores I gather there is not wide cooperation between gas and electric people in this sales area. A. That is correct. Except in these joint stores there is no cooperation.

I believe that gas and electric sales programs being operated independently can result in increased load to each company. Competition in itself encourages greater effort on the part of the competitors, and I am sure that we in the gas companies are doing a better job because we are out fighting for business. I am afraid the electric companies can probably say the same thing.

Q. Do you think, Mr. Dalbeck, that your sales promotion activities would be more successful if the gas companies of which you are president were wholly independent of the NEES system? [832] A. No, I do not think so. We now do everything we can to encourage our salesmen. I don't know what more we could do that would make the program more successful.

Q. Do you feel any restrictions on your sales promotion activities from NEES management which you feel are imposed to protect the system's electric load? A. No, definitely not.

Q. I want to turn now to the factors you said are not confined to the gas business. Will you restate some of the activities you classify in this category? A. Well, these involve all the things that have to be done to enable us to get on with the business of selling and supplying gas. It includes personnel and labor relations, customer relations, community relations and public relations. It also involves legal, financing and other services.

Q. Who handles personnel and labor relations, and how? A. The manager of a gas division retail company performs many personnel and labor relations activities in his day-to-day work. Some of these duties are accomplished without consultation with gas division headquarters and

some, due to established policy, are referred to both gas division and to the NEES central organization. There is constant two-way communication between NEES, gas division, [833] and the local companies concerning labor and personnel matters.

Q. What are some of these matters? A. Retirements and company expansion can leave the local manager of an individual company with a personnel problem. In all replacements of supervisory personnel he calls on gas division headquarters for assistance. This is because in our whole concept of developing executive personnel we may transfer personnel from one company to another to advance, train and broaden them.

In addition, the gas division has training students on its payroll almost continuously. These students can be shifted into the various local companies as their aptitudes and the requirements of the companies dictate. For example, in the fall of 1958 it was felt that an additional industrial sales engineer was needed in the commercial and industrial sales department of the Mystic Valley Gas Company. A training student with the necessary qualifications was working with the gas division headquarters at the time and was assigned to the department. He filled the additional personnel requirement of this department satisfactorily and is now a permanent fixture.

The New England Electric System has training students working throughout the system continuously, many of whom spend a part of their training in the gas companies. [834] These training students form a pool of college graduates from which gas division companies have obtained replacement or additional personnel. At the completion of the NEES training program, these young men have a broad background of most of the NEES operations and policies and are valuable additions to any gas company personnel. We are only interested in the trainees who are interested

in the gas business and we certainly are indebted to the system for the type of men we have been able to attract.

Q. How are personnel changes made at the local company level? A. The manager of each company continually surveys the personnel requirements of each of his company's departments. He discusses these requirements with his department heads and together they make changes in their organizational set-up.

All shifting which would not result in changes of classification or rate of pay of any employees are made by the manager without referral to higher authority. If a manager, however, determines it necessary to add personnel to his payroll or to make shifts in his organization which result in changes of classification or rate of pay of his employees, he refers them to gas division headquarters who, if in agreement, would discuss such change or increase with the NEES vice president for management.

[835] Q. What does personnel involve beside hiring and promoting? A. The overall morale of the employees in any company is closely watched by each manager. Each company has social functions after working hours, very often jointly with affiliate electric companies, which contribute to improved morale.

Q. What is involved in labor relations? A. There is the problem of dealing with the unions. Local working condition disputes and grievances are usually resolved in meetings between the manager and the union business agent.

Since actual labor contract negotiations are carried on for each company by the service company, the manager consults with NEPSCO staff personnel concerning labor problems. The assistant to the President of the Gas Division for Operations serves as the liaison in labor matters between the local company manager and the other segments of the NEES system.

Q. How are customer relations handled in gas division

companies? A. Customer relations are handled at the local level by personnel especially trained to deal with customers. The manager of a gas company has the ultimate responsibility for good customer relations. If dissatisfaction [836] occurs, the manager must settle the matter fairly and promptly in order to retain the customer's good will.

To encourage our employes to better perform the job of customer relations, the Personnel Department of NEPSCO has provided a joint AGA and EEI customer relations course which it has purchased and distributed to local companies. Supervisors give this course to customer contact personnel. In addition, the NEPSCO Personnel Department in past years has written and given a ten-lesson course in customer relations training to supervisory employes who then give the course to customer contact employes in their respective companies.

Q. You also mentioned community relations. Would you discuss this? A. Good community relations are essential, of course, to the success of any public utility, and take much of a manager's time.

Typically the manager of a gas company is active in charitable and service organizations such as the United Fund, the Rotary, Kiwanis and other service clubs, the Chambers of Commerce, and various industrial development committees. He also assists and encourages his employes to participate in charitable and service activities. Through such participation, the manager keeps abreast of the developments in the community his company serves and [837] on whose growth and prosperity his company relies.

Q. How about relations with municipal officials? A. The relations between a gas company and the municipal officials of the communities it serves must be maintained if the company is to succeed. A gas company in any community is a major taxpayer in that community. The company must

keep the assessors informed of additions and retirements of a company's property in order that proper community tax revenue will be derived from the gas utility. The manager, of course, must have discussions with the assessors in order to keep the tax burden of the company as low as proper.

Permits for street openings, permits for plumbing and gas piping work, and permits for structural changes and additions to company plant must be applied for almost daily in each locality by the gas company. If municipal construction such as bridges and highways require the relocation of gas mains, coordination between company employes and municipal officials is necessary. It is the manager's responsibility that such relations are carried on in a satisfactory manner between company employes and these officials.

Q. I gather that local community relations are primarily the responsibility of the local manager. Does he get important help from elsewhere in the system? [838] A. Yes, he does.

Changes in company policy which affect the public, and important personnel changes, sometimes require special effort by the company to keep the public informed. News releases then are usually prepared by the NEES central organization and are submitted to newspapers by the managers of each company.

For example, in 1955 most NEES gas and electric companies adopted bi-monthly billing. Explanatory advertisements prepared at NEES headquarters were placed in local papers informing the public of this change and indicating to them where questions concerning future bills could be answered.

Important events in any of our service areas which are of concern to NEES gas and electric companies are customarily reported to me by the local company managers

immediately by telephone. I, in turn, keep the vice presidents of the NEES system for management and public relations informed of such events. In addition, each company manager submits to me a monthly manager's letter which includes outstanding community events which have occurred over the previous month. A copy of this letter is also forwarded by the manager to the system vice-president for management.

Q. How about at the local level; are community relations [839] handled jointly by gas and electric companies? A. The managers of each of the affiliate gas and electric companies of NEES perform many community relations activities together. They are in constant contact with the public on the telephone, at service club meetings, at city and town government meetings, and on the street. Many questions by the public concerning the activities of either the gas or the electric company in a given locality are handled by each manager for the other company.

Q. All right, now, I want to turn to professional services. How are these handled? A. Well, if you mean medical and legal services, these are handled largely by the service company. The gas companies have no doctors or lawyers on their payrolls, as such. As I said earlier, the service company lawyers are appointed counsel to each of the companies, and we call on them pretty freely as we would on a gas division general counsel if there were one.

Q. Do you find it helpful to have counsel who are also counsel to the NEES system electric companies? A. Yes. I feel that it is a distinct advantage. A lot of the legal problems of the gas and electric companies are very similar, and I believe we therefore get better legal service at lower cost than we would be likely to get from outside the system. Furthermore, the [840] gas companies by themselves could not afford a legal staff of the size and depth which the service company provides for the whole system.

Therefore, I think we do benefit from having lawyers in common with the electric companies in the system.

Q. Are there examples of particular services rendered by the service company on a combined basis? That is not just the same sort of service rendered to both gas and electric companies but a particular service performed jointly for both. A. Yes. For example, when the national highway program law was passed, which stated that utilities may be reimbursed for the relocation of their services due to this highway construction, an employee of the New England Power Service Company was appointed to co-ordinate all reimbursement efforts by NEES companies and to minimize whenever possible nonreimbursable relocation expenses. He represents the gas and electric companies where interests are nearly identical on this question.

Another example is union negotiations which are actually handled on a unified basis for the system.

Q. You mentioned a safety department in the service company. Will you give a brief description of safety activities in the gas companies? A. The safety department directs all safety activities [841] throughout the NEES system. Local safety committees have been set up in each of the gas division companies, and monthly meetings are held by these groups which investigate accidents and recommend corrective measures for unsafe conditions. Safety department personnel often attend these meetings and provide literature and information to assist these local safety groups.

The safety department runs annual safety campaigns which are carried out through local safety committees in order to reduce accident frequencies. The success of the efforts of the safety department and the local safety committees is notable and gas division gas companies have won several safety awards from the National Safety Council and the American Gas Association. For instance, the Mys-

tie Valley Gas Company won the national award from the National Safety Council in competition with other gas companies of comparable size throughout the nation for the years 1954, 1957 and 1958. This company also received national recognition from the American Gas Association in 1959 for completing 1,000,000 man-hours without a disabling accident.

In 1958 the gas division as a whole received an award from the American Gas Association for having improved their accident experience in 1957 by more than 25 percent as compared with 1956. Many of our smaller companies [842] have also received similar national and regional awards in competition with other companies of similar size.

Q. You mentioned financing. What about financing and other treasury functions? A. Ordinarily, of course, billing, accounting, banking, borrowing and issuing securities are a large part of the management responsibility in running a utility, and if I were in charge of a separate gas company or system I would have to be concerned with them. I would be directly involved with people who make tax returns, corporate returns and regulatory commission returns. Being in the NEES system I can obtain these services from an expert organization under the direction of the system treasurer.

Q. Mr. Dalbeck, you said at one point that your chief concerns as president of the gas companies were the technical, operational aspects of gas service on the one hand, and, on the other hand, the economics—questions of promotion and supply. Then you said there are lots of subsidiary, managerial problems that have to be taken care of. Would it be fair to say that your most important contacts with the rest of the NEES system relate to these subsidiary managerial problems? A. I think that is generally correct. Obviously, the operations of gas and electric businesses involve different techniques, and the economics have

to be handled [843] separately not only because of the competitive aspects but because again the problems are different.

On the other hand, there are marked similarities between gas and electric service which make the common performance of many functions logical. Both operations involve producing and distributing a source of energy and taking it into people's residences or places of business. Both have to render bills and keep similar customer records. Both are regulated by the same state authority, and have similar legal problems arising out of their status as utilities. Both have similar labor, customer and community relations problems.

Under these circumstances it seems to me that it would be uneconomic, inefficient and not in the public interest if we did not combine forces to handle a lot of these problems together. Meter reading is perhaps the most outstanding case of outright duplication if functions were performed separately, but in other areas it would be wasteful to maintain separate offices and employ people to do things which can well be done by one for both utilities.

Of course, when you come right down to it, you cannot separate many of the special problems of gas from electric. Therefore, to do the best job possible you have to have an organization such as we now have which [844] can work together on the operational, economic and all other aspects of a problem.

Q. Just to round out this part of your testimony, will you describe an example of the type of situation where everyone works together on operational, economic and other aspects of a particular job to get it done successfully?
A. Yes. A good example occurred when we extended our mains into Burlington, a new territory, contiguous to our service areas in Reading, Woburn and Lexington.

An industrial customer approached us to inquire of the possibility of purchasing gas for his new plant to be located on Route 128. Our existing main in Woburn was about one mile from this plant.

We gave the problem careful study and determined that it would be economically justified to serve this customer. We did not, however, have a franchise in the territory, and before petitioning the Department of Public Utilities for the right to enter Burlington, we decided to survey that portion of the town close to Route 128 for other possible customers, both industrial and domestic.

At this point we could visualize a substantial expenditure in Burlington, and I discussed the project with the then vice-president of the NEES system in charge of retail companies, with Mr. Hanson, as to capital funds, and with other NEES system officials. When we were agreed [845] that the project was feasible, we then arranged with service company legal personnel to prepare the application for a franchise for filing with the Department of Public Utilities. This application was filed and hearings were set.

In the meantime it was important that the citizens of Burlington know what was going on. So we arranged with Mr. Ahern, vice-president for public relations, to prepare news releases and publicity. This accomplished several things. First, it explained to the Burlington public what we were doing and averted misunderstanding. Second, the publicity made Burlington aware of gas as a desirable fuel and opened many doors for our canvassers.

Mr. Ahern also advised us on giving town officials advance information on our plan, on the best approach to follow in developing our relations with the public, and later on helped us make contact with town officials.

With the hearings set by the Department of Public Utilities, our NEPSCO counsel proceeded to prepare the case and presented it before the Department. The case was con-

tested by another gas company desiring to enter this territory. So service company counsel's long experience in public utility law proved to be most helpful.

Prior to the hearing we had prepared a construction [846] estimate which indicated that, based upon our potential revenues from Burlington, we would run about 20 miles of mains over a 3-year period at a cost of about \$600,000. When I submitted this budget to NEES there was no question as to the expenditure or its timing. I did not need to be concerned about financing the undertaking as Mr. Hanson had already cleared that angle.

In connection with our long-range construction plans, it was apparent that we would have to buy land for a meter station, and we again called on the service company for assistance, this time the right-of-way department. Land along Route 128 has become tremendously valuable, and that fact plus the fact that we were restricted as to the land we could acquire because of zoning restrictions and the need to get as close to the Tennessee pipeline as possible, made our search for land a very delicate operation if we were going to get the property at a relatively reasonable price.

The land was acquired and the deed and the real estate closing were handled by another group of lawyers in the service company. After approval had been obtained by the DPU for entry into Burlington, Mr. Ahern arranged for CONTACT, the employee magazine, to prepare an article on the Town of Burlington which pointed out its rapid growth, its attractiveness to industry and its rich historical [847] background. Reprints of the article were made for distribution to Burlington residents, and copies were also made available to town officials for their use in advertising the town.

As a result of the efforts of so many people in these many areas of the NEES system, our entry into Burling-

ton was a tremendous success, and the excellent public relations built up resulted in a demand for gas beyond our fondest expectations.

As a result of this concerted program, we entered an account of the Burlington story in the 1959 AGA public relations contest, under the title "100 Blue Flames for Burlington", and won an honorable mention, the only award granted for a public relations program that was not companywide.

You can see from this outline that in this very important extension to our territory NEES management, NEES treasury, NEES public relations, NEPSCO engineering, NEPSCO lawyers and CONTACT played vital parts.

As a result of our combined efforts in Burlington the demand for services required our advancing our construction program so that instead of spending the \$600,000 budget in 3 years and connecting 500 customers in 5 years as we had originally estimated, we did both in 15 months.

Q. All right, now, Mr. Dalbeck, I would just like [848] to discuss in a little more detail a few of the areas you have touched upon.

First, you have mentioned sales promotion several times, and indicated its importance to the business, and I want you to describe in detail just what activities go into sales promotion and what results have been achieved, especially in the period since the gas division was organized. First, will you describe generally what was done in connection with organization of the gas division to promote sales. A. Probably the most important immediate objective in forming the gas division was to develop an aggressive sales program, completely separated from electric sales, in order to increase as rapidly as possibly the revenues from gas sales. A gas sales promotion manager was appointed to the division staff, functioning under the direction of the president of the gas companies. Separate sales

organizations were set up in each company to sell gas appliances exclusively.

In the smaller companies the managers functioned as the sales managers and in the larger companies gas sales managers and sales supervisors were appointed. An independent advertising agency was selected to handle gas advertising and gas promotion.

Although gas salesmen generally operated under the same union sales agreement as electric salesmen, added [849] sales incentive bonuses, not a part of the union contract, were offered gas salesmen during campaign periods.

A gas-water heater rental program was instituted for the rental of domestic automatic water heaters, and this has recently been expanded to a trial period of gas commercial automatic water heaters.

In 1951 dealer sales of gas appliances were practically nonexistent, but the promotion of gas appliances has had a salutary effect on dealer sales, reported unit sales by dealers in 1959 being about 6,600 units, including about 1,500 house heaters.

As a result of aggressive promotion by the gas utilities of gas appliances, a marked upward trend in the number of dealers, large department stores and discount houses advertising and selling gas appliances is evident in our territory.

Q. Please describe and evaluate briefly some of the results of your sales efforts. A. We are doing well in a highly competitive market against both oil and electricity. In 1952 we had a house-heating saturation of less than 2 percent. We now have over 32,000 customers classified as house heating, or 17.3 percent of our total customers, and probably 3,000 or 4,000 more who heat their apartments with gas but do not use enough to qualify for our house-heating rate. It is evident [850] from the amount

and type of oil-industry advertising that gas home heating is having an impact on the domestic heating market.

In the field of water heating we do not consider electricity a real threat in spite of the high allowances made by our electric competitors, both affiliated and nonaffiliated. Proof of that is the fact that since 1952 we have rented or sold 40,000 water heaters or about 20 percent of our total customer. When considering sales by other merchandise outlets, such as Sears Roebuck and plumbers, it is obvious that gas is the accepted fuel for water heating and inroads in this market have not been significant.

Another area in which the gas companies are making inroads into electric sales is the field of clothes dryers. In 1951 very few gas dryers were sold and, in fact, the gas dryer of that period was not competitive with the electric dryer in construction, price or economy of operation. However, since that time tremendous improvements have been made in gas dryers. Several manufacturers are aggressively advertising them, and our gas companies are selling increased quantities. They are priced slightly higher than electric dryers, but are easier to install, easier to service, less expensive to operate and dry clothes faster. [851] All of these advantages, together with aggressive merchandising and advertising, have resulted in annually increased sales, from 70 in 1951 to 803 in 1959.

Gas refrigeration has been dormant for some years because of the demise of the Servel gas refrigerator. However, RCA Whirlpool, who bought out Servel, have developed a new gas refrigerator which is now in production and will offer to the gas industry a refrigerator that will be superior in performance, attractive and economical and at a price competitive with electric refrigeration.

Norge is also now producing such a gas refrigerator, and the industry, including of course ourselves, expects aggressively to promote and sell gas refrigeration on a large

scale beginning this year. A statement made recently by the chairman of the board of one of these companies predicts that within 10 years gas will enjoy 25 percent of the automatic refrigeration market.

Incinerators are a fairly new development in gas appliances, but we are selling increasingly larger volumes of incinerators. Although many electric incinerators are sold, we do not consider electricity in any way competitive with gas, either as to economy or operation. The principles of odorless, smokeless incineration is a feature that is impossible to achieve in electricity.

Of course, we do not do as well as we want to [852] in every respect. On new homes and on ranges the electric industry gives us a hard time. Even in new homes where we get the house heating and water heating load, we still too frequently lose the kitchen. We have builder men devoting their full time to working with contractors and architects, and these men cover every new building erected in our territory. We offer builders special allowances to install gas appliances to meet the low prices offered by electric manufacturers and utilities. We pay our builder men special bonuses for sales of appliances in new homes.

We are convinced, however, that through new developments in gas ranges, the modernity of gas and continued aggressive selling we are making gains. Gas ranges today offer as much in color and beauty as any competition and many advantages in cooking. The efforts of American Gas Association national advertising, local promotion and aggressive selling is reversing the trend. We sold more than twice as many gas ranges in 1959 as we did in 1952, but we still are not satisfied.

Q. How about commercial and industrial sales? A. Up until a couple of years ago we did not do as well as we thought we should. Then we reorganized this department, developed a load-building bonus plan and, as a result, last

year we added almost twice the revenue we had in any previous year. As a matter of interest, we [853] know of only one restaurant in our largest company area using electricity for cooking, and we installed in that restaurant two additional gas units on trial, and since then are in process of converting this restaurant to gas commercial cooking.

Q. What do your promotional efforts cost? A. In 1959 we spent over \$1,100,000 on this promotion, or a cost per customer of \$5.67. Local conditions, of course, affect the expenditures for promotion, such as size of the territory and the number of salesmen required, the number of newspapers in the company territory, whether weekly or daily, the number of desirable billboards, radio and TV stations, and so on. We use all of these facilities in our advertising, but within any company these expenses will vary.

The amount of new building has an impact on promotional expenses to a large degree, since it affects the number of new builder salesmen, both residential and commercial, and the amount of builder allowances where such plans are effective.

We have a policy whereby we will allow up to \$115 a home if the builder installs all gas appliances, and the allowances vary downward depending on whether he puts in a house heater, a water heater, a range or whatever.

To indicate that we are really serious about [854] our range business, which is the most difficult to sell in a new home, that appliance carries the largest allowance, next to a house heater. On top of that, our building men, as I said, receive a bonus for appliances installed in a new home, so they are individually doing their best to sell in competition with other fuels because it means dollars in their pocketbook.

Q. What is the largest item of promotional expense?
A. Salaries, commissions and bonuses. All salesmen, in-

cluding commercial and industrial, have a guaranteed base salary, but are largely compensated on an incentive plan. This point is important when considering the competitive aspect of our business because it would not make much difference what the management point of view might be construed to be, the salesman's bread and butter depends on what gas and gas appliance he sells.

The way our plan works out in general is this: a domestic salesman has a base compensation of about \$2,800 per year. Under our union sales contract we pay commissions of 6 percent on the installed selling price of appliances. We have salesmen who sell over \$65,000 per year, and none sell less than \$30,000, with our average around \$46,000. This means commissions of from about \$2,000 to \$4,000. On top of that, during periods that we campaign appliances, and that is every month except January, we have had further [855] incentives in the form of bonuses whereby a salesman may receive a set amount per appliance after selling a certain number of ranges, water heaters, house heaters or whatever appliance is being featured. The result is that during campaigns the more the salesman sells the more bonus money he receives.

The effectiveness of these plans is demonstrated by the fact that during 1959 we had salesmen making as much as \$13,000 in that year, and the average salesman made \$8,700. That's not bad for door-to-door selling. The same principle applies to commercial and industrial salesmen except that their bonus is based upon either MCF added or on net revenue added. The costs are all a part of our net promotional expenses, being charged either to our new business expense or to merchandising. Administrative salaries and expenses of sales managers and sales supervisors and clerical assistants are, of course, a part of our promotional cost and are necessary to supervise properly the activities of our 70-odd salesmen of all categories.

Hearing Examiner Ewell: We will take a short recess.
(Whereupon, a short recess was taken.)

[856] By Mr. Quarles:

Q. Before the recess we were talking about salaries, commissions and bonuses. What is the next biggest item of expense in promotion after salaries and commissions?

A. The next largest item is our advertising program. It was early recognized that the most effective approach would be for the Gas Division to employ its own agency. This agency works very closely with our sales organization and we consider their account executive a definite part of our selling organization. He and others from the agency always attend our sales meetings where campaigns are laid out and plans made for future selling.

The Harold Cabot and Company, Inc. agency of Boston prepares practically all advertising for the Gas Division, prepares all promotional material and directs marketing studies as authorized. The only advertising not originating with the agency is where company managers, at their discretion, place cooperative advertising with builders or dealers, and other minor advertising of a strictly local nature.

Q. What media do you use? A. Media used are newspapers, radio, TV, outdoor billboards, matching truck cards and bill stuffers. The advertising program is tied in to appliance sales campaigns held during the year and all advertising is pointed to the [857] sale of specific appliances.

Q. What is your annual advertising budget? A. Annual expenditures for advertising in 1959 amounted to about \$250,000. During 1960 we propose to spend an additional \$25,000 on general gas promotion advertising, in view of the considered need for combating the type of oil advertising that is now appearing. It is intended to devote more

attention to gas as a fuel, making a positive approach on the advantages of gas.

The cost per meter of advertising the Gas Division Companies is about \$1.35 per domestic customer. There is a variance in per-customer advertising costs in our own companies, this being affected by the number of newspapers, both daily and weekly, in the area served by each company.

Q. What other expenses are there? A. There are a number of other items of promotional expense that are important to the development of gas load. I mentioned our new building allowances, which are a major item in many of our companies. There are the expense of sales rallies, and the cost of sales training programs for our salesmen and the costs of dealer cooperation sales programs where in some areas we have men who are specifically working with dealers in our territory.

Hearing Examiner Ewell: You referred to some new type of advertising that the oil people are putting out now [858-9] that you feel you have to exert some specific effort to combat. Could you describe, in a few words, I am just curious to know, is that some new angle that I hadn't heard of perhaps.

The Witness: Yes, I will be glad to, because we really think it is very insidious advertising and something that is affecting the whole area of home heating sales. Their advertising program has been beamed in the last year or so almost directly to the safety of oil, as compared with the safety of gas for heating. They have in the New England area, and I don't know how general it is in other sections of the country, the sleeping baby symbol, which carries under it the words: "You can be sure they are safe if you heat with oil."

Hearing Examiner Ewell: Does that refer to house heating as well as water heating?

The Witness: Primarily house heating. As I say, it has

been a very insidious campaign, and it is having some effect on our selling. Of course, with the competitive angle as it is now, where oil and gas are at about the same price, something like that can turn the scale. Of course, I think that is going to work out to the disadvantage of both the gas industry and the oil industry, because along comes the electric industry and they are able to point out the fact, if they would be so insidious themselves, and I [860] am sure they wouldn't be, that there are explosions that occur in both gas and oil home heating.

The fact is, and this is something that we haven't been able to advertise because the information comes from sources that we aren't free to use, that nation-wide whereas the damage from gas explosions amounts to about two percent of the total fire loss of the country, in oil it runs better than six percent. So that their advertising is not completely honest.

Hearing Examiner Ewell: While we are on this little digression, I want to ask a question about the new gas refrigerators. Do the new ones come out so that they don't use water in cooling like the old ones, I believe, did?

The Witness: I have seen the new RCA Whirlpool gas refrigerator and the new Norge refrigerator, and I am certain that as time goes on they are going to be a very acceptable appliance. Yes, they still use water. The Norge is, practically, an improvement over the old Servel gas refrigerator. The RCA Whirlpool is a combination gas and electric refrigerator, as a matter of fact, because in their frost free box they actually use three fans.

Hearing Examiner Ewell: Do they use water also?

The Witness: They use water also.

Hearing Examiner Ewell: A continuous stream of water?

[861] The Witness: Yes. Well, the other reason that they are piping for water today is that with these new

automatic ice cube makers you have got to have a water connection anyway.

Hearing Examiner Ewell: All right; go ahead.

The Witness: Did I clear up the oil business?

Hearing Examiner Ewell: Yes.

By Mr. Quarles:

Q. Coming back to the sales promotion, how is the amount to be spent on sales promotion ascertained? A. The amount to be spent on sales promotion must be a matter of business judgment, but in the light of our sales results that start with the sale of an appliance and then are reflected in increased sales of gas resulting in increased utility revenues, it is apparent that we are getting good results from the money we spend.

Q. Can you give any comparison of your results with those of the industry generally? A. Yes. A recent tabulation prepared by the New England Gas Association, the trade association for gas companies in the area, reported that from 1952 through 1959 New England gas companies had increased their MCF sales by 132.27 percent. Gross revenues increased 70.07 percent and customers decreased 2.59 percent. According to a footnote attached to this tabulation, this represented 99.8 percent [862] of all New England gas meters.

Our own Gas Division companies averaged better than the New England gas industry as a whole. Where industry MCF sales increased 132.27 percent, ours increased 178 percent. Where industry revenues increased 70.07 percent, ours increased 95 percent. We practically held our own on customers, with less than one fourth of one percent loss against the New England Gas industry's loss of 2.59 percent.

The overall increase was pretty well spread over all classes of sales. I previously commented on the increase in house heating customers from 2-1/2 percent at January

1952 to 17.3 percent of our total domestic customers in December 1959. This does not represent all of our customers who heat their homes or apartments with gas because there are many small unit heater users who are better off on our domestic rate than on our househeating rate, who are therefor not classified as househeating customers on our records.

Due to the increased sale of house heating, water heating and other domestic appliances, there has been since 1952 an increase in domestic MCF sales of 157 percent and in domestic revenues of 94 percent. Commercial MCF sales in this same period increased 130 percent with revenues gaining 80 percent. Firm industrial sales increased 113 percent with revenues increasing 76 percent. As I stated a moment ago, we have just started in the last couple of years to really develop this business and we feel that if we can keep our costs within reason the future will show even larger gains in this area.

Q. How about off-peak or valley gas sales? [863] A. Until the advent of natural gas we had no so-called valley gas to sell in the form of industrial interruptible sales. The volume of gas sold on an interruptible basis in 1959 amounted to 1,046,000 MCF and represented \$430,000 of revenue. There is a limited market for this gas in our area. There is a very thin margin between the commodity price of gas from Tennessee and the price at which we can sell in competition with No. 6 oil, and this results not only in very small profit to the company but also, in many cases, it limits the amount the customer can justify paying for alternate fuel burning equipment. For example, the commodity price of gas is now 36.1 cents per MCF. On a fuel-for-fuel basis, if we sold this gas at 40.1 cents, the oil equivalent would be \$2.705 per barrel. Last summer this oil had a posted price in Massachusetts of \$2.64 per barrel. There are some types of industry where increased

boiler efficiencies, a better product and less maintenance make gas attractive in spite of an unfavorable price differential, and we explore every possible area to sell this summer valley gas.

Q. Have sales promotion results been substantially uniform as between NEES gas companies? A. No. Although the same amount of effort, the same advertising, the same compensation plan and approximately the same number of salesmen per customer are used by each of our companies, results within the several companies will [864] vary. Where one company produces excellent results in one area of the business, another will excel in other areas. Local economic conditions, local housing conditions, and local incomes, all affect the results.

Also, in any sales organization there are strong and weak salesmen, but this is to some degree under our control.

For instance, Lawrence in 1951 was a distress area economically and because of this and the fact that the textile industry used very little gas, industrial sales were less than \$10,000 per year. With the economic resurgence of the community and with the transition from a textile town to a city of diversified industry we sold last year \$271,036 in industrial gas. On the other hand, Mystic Valley has not been good industrial gas territory, but the commercial sales in this company have increased more than any other company except little Norwood.

Mystic Valley's commercial revenues have more than doubled since natural gas—last year's revenues being close to \$1,000,000 as compared with \$485,000 in 1951.

In the domestic sales field the smaller companies, with the exception of Norwood, are competing with associated electric companies and have done by far the best job in the domestic field. This can be attributed to several factors, but the principal one is growth in the territory and the large [865] percentage of new homes that are going gas.

In Northampton and Norwood over 90 percent of the new homes we can reach through our main-extension policies are going gas. It is also a fact, for some reason, that the nearer we get to metropolitan Boston, the tougher time we have to sell gas; this seems to be true for other companies as well as ours.

Q. I gather then that you feel sales promotion by the NEES gas companies has been aggressive and effective.
A. Yes, but we can never be completely satisfied. Since 1951 we have added load that with good operation has resulted in our earnings going from less than two percent to 6-1/4 percent on net plant last year. We still recognize that the only way to keep our rates at a reasonable level is to increase our load so that some of the increased costs can be absorbed through increased revenues.

And come what may, electricity, oil, coal, atomic energy or what have you, we will keep up the fighting to add gas load as much in the future as we have in the last seven years.

Q. Mr. Dalbeck, what is the single most important use for which you sell gas?
A. As far as quantity goes, space heating; space heating accounts for roughly 55 percent of our firm sales. Also, as far as expansion goes, both in the recent past and in the near future, space heating has accounted and will [866] account for by far the greatest part of our growth in firm load.

Q. What is the most important energy source for space heating, other than gas, in New England?
A. Our chief competition comes from oil; in the case of house heating it is number 2 oil.

Q. I show you a table entitled "City Gate Cost of Natural Gas for Space Heating vs. Retail Cost of #2 oil"; will you tell what that shows?
A. It shows for each of thirteen cities the city gate cost of gas as compared with the cost of oil with an equal heat content. Columns 3 and 4 give

the demand and commodity charges in effect on January 1, 1960 for natural gas and column 5 gives the resulting cost per MCF at a load factor of 27 percent which is the approximate average load factor for space heating gas. Columns 6 and 7 set forth the retail cost of number 2 oil per gallon and on a basis equivalent in heat content to an MCF of gas. Column 8 shows the difference on an equivalent-heat basis.

Q. What is the source of the information in this table?
A. The figures information in columns 3 and 4 represent rates filed with the FPC: the figures in column 6 are Bureau of Labor Statistics, Retail Prices and Indices of Fuels and Electricity for January 1960. Columns 5, 7 and [867] 8 are computed.

Q. Was this table prepared under your supervision?
A. Yes, it was.

Q. Does it accurately set forth the information it purports to show? A. Yes, sir.

Mr. Quarles: I offer it as Respondents' Exhibit No. 67.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondents' Exhibit No. 67 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Does this table give an accurate direct comparison of the cost to a customer of heating by oil and by gas?
A. No. The city gate cost of gas is the wholesale cost to a distributing company. The price to customers must include the distributing company's other costs. Also this tabulation takes no account of the difference in efficiency between oil and gas. Furthermore, of course, we do not actually buy at 27 percent load factor; we find uses other than space heating which improve our load factor, and we make gas on the coldest days. These reduce the price we

pay for gas to something lower than the 27 percent load factor price.

[868] Q. Then what is the value or significance of this exhibit? A. The information in it is noncontroversial. What this exhibit shows is that if on any set of assumptions gas had a price edge on oil in New England it is a much thinner edge than in any other part of the country. It shows that the price of oil is substantially uniform from city to city.

On the other hand, as of January 1, 1960, the price of gas in Boston was highest in the country, and Malden next. The range is from 32.5 cents per MCF in Kansas City to 111 cents in Boston. The only reason for the difference between Malden and Boston is because they are supplied by different companies which have raised their rates at somewhat different times. As of April 5 this year, Tennessee raised its rates so that its price at Malden for 27 percent load factor gas would be 111.0 cents per MCF, as in Boston.

Q. I show you now a tabulation entitled "Tennessee Gas Transmission Company—Zone Rates Effective April 5, 1960". What does this show? A. It shows each of Tennessee's six zone rates for general service gas as of April 5, 1960. It also shows what these rates would be at 100 percent load factor and 65 percent load factor, and it also sets forth the special optional rate for small users, the GS rate, in each zone.

Q. What is the source of this information? A. The figures in the first two columns are taken [869] directly from the Tennessee Gas Transmission Company's eighth revised tariff, Volume 1, effective April 5, 1960. The third and fourth columns are computed.

Q. Was this tabulation prepared under your supervision? A. Yes.

Q. Does it set forth accurately the information it purports to show? A. Yes, it does.

Mr. Quarles: I offer this tabulation as Respondents' Exhibit No. 68.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondents' Exhibit No. 68 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. What is the significance of this exhibit? A. It shows for a single pipeline company how distance from the natural gas field directly affects prices. You will also note that it shows a greater relative increase in demand charges than in commodity charges, and therefore that the zone differential is greater for lower load factor gas. Thus in zone 1, the difference in price between 100 percent load factor and 65 percent load factor gas is 5 cents per MCF; in zone 6, which is New England, the difference is [870] 10.9 cents. This is what you would expect since in large measure the difference in cost is represented by the fixed charges on the longer pipeline required to supply natural gas to New England.

Q. Does this difference in the cost of gas affect your sales picture significantly in New England as compared with other parts of the country? A. Yes, it certainly does. I said that space heating makes up about 55 percent of our firm load. It is considerably higher in other parts of the country. Viewing it from the point of view of market saturation only 22 percent of New England residential customers are house heating customers, while in many parts of the country virtually every home which is within reasonable distance of a gas main is heated by gas. In some areas selling gas for space heating is no problem at all; the only question is how far you are willing to extend your lines for a customer clamoring to get on your system. The cost differential in favor of gas leaves considerably more room for maneuver than we have here in New England.

Q. I show you a table entitled "Table 137 - 1959 issue of 'Gas Facts' published by the American Gas Association." What does it show? A. It shows gas heating saturations for nine regions of the United States in the years 1952 through 1961, projected. It shows a 1959 saturation in New England of 21.9%, while other parts of the country show saturations [871] as high as 99.6 percent.

Q. What is the source of those figures? A. The table was published by the American Gas Association which is the principal national trade organization of the gas industry.

Q. What is the value of this exhibit? A. It gives an idea of the comparison between the househeating saturation in New England and in other parts of the country. While the New England gas companies have done a pretty good job in adding househeating customers since natural gas became available in 1952 and 1953, I am afraid that the competitive situation is now such that the estimates shown in the table for the years 1960 and 1961 are on the optimistic side. It will be noted that the increase in saturation in other parts of the country notably east north, central and middle Atlantic is still greater. These other two areas are compared since they buy gas from the same pipeline systems as New England. In these areas the competitive price of #2 oil is substantially the same as in New England but the city gate cost of gas is much less.

Q. Mr. Dalbeck, you referred to percentage saturation. What is meant by that? A. Percentage saturation represents, in this table, the number of gas customers who use house heating.

Q. The number per hundred? [872] A. Residential.

Mr. Nowlin: As compared with potential?

The Witness: No, it is the ratio of house heating customers to total domestic customers.

Mr. Nowlin: Off the record.

(Discussion held off the record.)

Mr. Quarles: I offer this as Respondents' Exhibit No. 69.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondents' Exhibit No. 69 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. What have the New England gas companies done or are they doing to help this situation? A. To a large degree, of course, the problem is inherent. It costs more to bring gas to New England. We have, of course, been fighting before the Federal Power Commission to protect our interests in each of the rate cases of our suppliers. This is a lengthy, costly and complicated business in which we find ourselves not only contesting our suppliers' cost and the return he should earn, but also fighting Tennessee customers in other zones.

A major problem in relation to space heating gas [873] is its low load factor, which gives rise to peak shaving. We do not have low cost underground storage pools in New England. We are presently peak shaving by manufacturing relatively high cost oil gas and LP air gas.

We have studies going to explore the possibilities of large volume storage of propane, and of liquefied natural gas. We are also studying advanced methods of converting coal or oil into a substitute gas. We have high hopes that out of these studies will come helpful solutions, but it would be unrealistic to expect that they can overcome the basic handicap of distance from the source of natural gas which will continue to be our basic fuel for many years to come.

Another area in which we attempted to improve our position has been to get a peak shaving service from the pipelines. For four winters prior to last winter, we obtained such a service from Tennessee. Unfortunately the Federal

Power Commission denied it as a permanent service and no form of storage service is likely now, at least in the near future. Algonquin has managed to provide a temporary Winter Service for the last two years, but permanent approval has not been granted.

Q. How has all of this affected sales and load growth in the NEES system gas companies? A. I believe we have done a good job since the advent of natural gas by way of expansion of good service at [874] reasonable rates. But this has been accomplished in the face of increasingly rough competition, and an inflationary economy. It has been our experience over the last few years that it requires about a 10 percent annual increase in MCF sales of gas just to offset the annual increase in wage rates, municipal taxes, and increased cost of materials and services.

This just keeps us standing still as far as the stockholders are concerned, and it requires more than a 10 percent annual increase to help them. Increases in this order of magnitude obviously must come largely from space heating sales. Since our retail rates for space heating gas are nearly equivalent to our competition, and the cost of gas is pressing harder all the time, it is going to take even harder work to maintain our position, let alone improve it. Specifically, unless the retail price of oil rises, which I see no reason for expecting in the near future, we will be unable to raise our space heating rate without slowing down our rate of increased sales. We are doing our best to control costs. We have been operating with a minimum organization all along, relying on the Gas Division to back up the local companies and on the Service Company to back up the Gas Division. There is not room to cut the organization any more.

Q. Does this have a bearing on the effect if NEES [875] were to be directed to dispose of its gas companies or properties? A. It certainly does. We are just not in a

position to absorb increased costs or loss of economies as gas companies in other parts of the country may be. I am unable to foresee all of the effects if the gas companies were severed from the NEES system, but I do know that our problems in competing would be immensely complicated.

Q. You have talked a good deal about the low load factor of space heating gas. Is it possible to improve the load factor at which you purchase from the pipeline by selling Summer Valley Gas on an interruptible basis? A. Yes, but as I explained previously the price at which we can sell this gas, in competition with number 6 oil, is only very slightly more than Tennessee's commodity charge, so that such sales hardly reduce the price we have to charge our firm customers at all.

Q. Mr. Dalbeck, you have referred from time to time to the subject of regulation by the Massachusetts Department of Public Utilities. Does that Department have regulatory jurisdiction over all the NEES system gas companies? A. Yes, it does.

Q. Does it also have regulatory jurisdiction over the affiliated electric companies operating in the same territory as the NEES System gas companies? [876] A. Yes, it has jurisdiction over all electric companies which sell electricity at retail in the Commonwealth of Massachusetts.

Q. What are the principal areas of regulatory jurisdiction of the Department? A. We are principally regulated as to rates, financing, accounting and service.

Q. What does the regulation of rates consist of? A. In the first place, we must file our rates and we are prohibited by law from charging in excess of the filed rates. We can make special contracts with particular customers, which we also must file, but there must be special grounds for these contracts so that they do not amount to discriminatory preferential treatment of the customers involved. In addition, the Department has authority to investigate the

reasonableness of filed rates, on its own motion or on the complaint of customers.

Furthermore, in the case of newly-filed rates the Department has power to suspend their effective date pending investigation. When new higher rates are filed, the Department invariably does suspend their going into effect and conducts an investigation in which the burden is on the company to justify the changes proposed.

Q. Mr. Dalbeck, are the rates for all these companies the same? [877] A. No, sir they are not. Rates for each of the companies have been established historically through the years, and although the low step for the house-heating rate is the same in each company, rates in the upper blocks vary to a degree.

Q. What is the jurisdiction of the Department with respect to financing? A. None of the gas companies may issue securities without the approval of the Department. The justification of proposed securities issues falls primarily on the Treasurer, the Service Company and the Treasury and corporate department, and the company President.

Q. What does the Department's regulation of accounting amount to? A. The Department has complete jurisdiction over all of our accounts, and audits our fixed capital additions prior to financing. Its Classification of Accounts has to be the "bible" of our treasury people. Our Treasury Department prepares the annual Return required by the Department for each Gas company.

Q. What does regulation of service consist of and how is it handled? A. This phase of regulation includes periodic tests of our gas for heat content and purity, periodic testing of meters, safety standards of operation and construction [878] and the like. These matters usually involve direct contact by a Staff Engineer of the Department of Public Utilities with the Manager or Superintendent of the

local company, and with the Assistant to the President for Operations.

Q. Mr. Dalbeck, are there important contacts with the Department aside from formal proceedings? A. Yes, there are. The Vice President of NEES in charge of Retail Company Operations, my Assistant to the President for Marketing and Supply and I all meet informally from time to time with the Department to advise them of problems that face us and to talk over what we propose to do about them. Last fall we reviewed informally pipeline rates, peak service, gas producer regulation, and what our gas companies were doing to protect the interests of their customers. The head of the Service Company Rate Department is in frequent contact with the Staff of the Department, as are treasury people of the Service Company. All of these contacts promote informed and effective regulation on the part of the Department.

Q. In your opinion, Mr. Dalbeck, would these contacts be maintained in the event that the Gas Division companies were split off from NEES? A. Not to anything like the same degree. The immediate pressures on the management of any small independent gas company make it highly unlikely that it would be done. Such [879] a management would have no personnel in a position to have the knowledge or the time to be fully familiar with the many problems of regulation in the way that our system specialists can do. Also there are many contacts with the Department that involve problems affecting all gas companies so that one conference with the Commission or staff may answer for eight companies.

For instance, our rates contain escalation clauses that permit us, with the approval of the Department, to increase our rates as the pipeline increases theirs. The last increase was April 5th, and at a conference with the Department prior to that date, attended by Mr. Krause of the NEES

system, Mr. Calvert, the Rate Engineer of NEPSCO, our Vice President in charge of Marketing and Supply and myself cleared our new rates for all companies in a couple of hours. Individual conferences on each company would have multiplied this conference by eight and involved eight different managers and what personnel they would need to discuss these increases.

Q. Mr. Dalbeck, returning for just a moment to rates, will you give a brief description of the gas companies' rate setup? A. Our filed rates are block type rates. In all companies except Lynn, there is a Residential Rate (K), a House Heating Rate (L) and a General or Commercial and Industrial Use [880] Rate (M). The House Heating Rate which is available for all domestic purposes to a customer heating his entire premises with gas, is also made available to Commercial or Industrial customers for space heating, air conditioning or large volume water heating, but not for other uses. The House Heating Rate is the lowest.

Lynn has a single rate (J) for all domestic uses, and a General Rate (M) for Commercial and industrial customers. Lynn also has a Building Heating Rate (K) for commercial and industrial space heating and large volume water heating.

Q. Aside from general increases or reductions on account of overall operating results, how do rate changes get initiated? A. We are continually meeting situations, usually competitive, in which our filed rates turn out to be non-competitive. Usually the situation comes to light first on the firing line. A salesman loses a prospective customer or the company loses an existing customer. The manager, after studying the situation then calls in the Assistant to the President for Marketing and Supply, and between them, with the help of the Service Company Rate Department, a

conclusion is reached on whether a rate modification should and can be made that will enable us to get or hold the business without losing too much revenue from other customers.

[881] After a change is worked out, if it is then approved by the President and the NEES Vice President for retail operation, the Rate Department prepares the change for filing with the Department of Public Utilities.

Q. Are your filed rates reviewed regularly? A. Yes. The Assistant to the President for Marketing and Supply, and the Service Company Rate Department both regularly review them, the former particularly for their effectiveness in getting new business and producing needed revenues, and the Rate Department for inequities and for simplification. The bill frequencies supplied by the local companies' Billing Departments are the basic tool used by the Rate Department in their rate design work. *

Q. How are the Special Contracts designed, negotiated and made effective? A. The occasion for one of those usually comes about when the Commercial and Industrial Sales Department of one of the companies or the Manager, comes up with a prospect for a large volume of gas and early contacts convince them that the customer cannot be sold on the filed rate. The next step is that the local company puts the facts before the Assistant to the President for Marketing and Supply, and he studies the problem with the local company. For example, one of our companies was approached by a large lens manufacturer who was considering whether to locate a new [882] plant in our territory or in another state.

He stated that a major consideration was the price of gas and that the price had to be about half of our filed rate. The prospective load involved was potentially very large, so that it was important to the company both from the standpoint of direct revenues and also for the secondary

effect on account of the benefit to the community. A rather detailed study indicated that the prospective use had a very high load factor for which we could buy gas at a lower-than-average cost. This justified a lower rate and made it possible to design a demand and commodity type rate that would give the customer a cost of gas he could accept and still guarantee to the company the revenue it had to have to support the investment in a line to service him.

At the request of the local company, the Assistant to the President for Marketing and Supply handled the negotiation of this contract and a supplemental one for interruptible gas. Altogether negotiations extended over a year and a half before the two contracts were successfully executed. During the initial phases, the Assistant to the President worked closely with the Service Company lawyers in drafting the contracts. The Rate Department filed the contracts with the Department of Public Utilities. All special contract cases are not as complicated as this one was, but they all involve the Assistant to the President [883] for Marketing and Supply and the Service Company lawyers and Rate Department. We have in some cases even received valuable help from the Service Company Power Sales Department, drawing on their long experience in the field of special negotiations for the sale of electric power.

Q. Did you participate in the work in connection with this study which Mr. Quig has described? A. Yes, sir.

Q. Will you describe the nature of your participation? A. I was consulted as to its scope, as to the Pro Forma organization suggested in these findings, and I reviewed with the Ebasco organization their findings, both as to personnel and changes required to operate segregated gas companies completely independent of electric. I discussed with many of the Ebasco personnel the operation of the

gas companies as they now exist, including methods, personnel and relations between the local companies, the Gas Division and NEES. I arranged for them to interview our key personnel, both in the Gas Division and in the local companies. We prepared in the Division office maps of our territory and other basic data that they requested. I consulted with them on all phases of their proposed findings and discussed with them the relationship between our present organizations and the organization as finalized in their reports. We discussed not only personnel but present and proposed space, [884] equipment and operations that would be cut away from existing joint operations.

My participation in the Ebasco study began with the first discussions as to their assignment and continued right up to the time their report was put in final form but was, of course, confined only to the gas company.

Q. Is their description of the NEES System gas companies as of January 1, 1959 accurate? A. Yes, sir.

Q. Have changes in these companies been material since January 1, 1959? A. Not insofar as the physical data on plants, the territory served, gas supply or operating conditions, particularly with reference to joint functions.

There have been some changes in organization and personnel due to retirements and re-alignment of responsibilities at the local level to produce increased efficiencies. The organizations, however, are essentially the same as to the total number of employees and the changes are not material with respect to this study.

It is interesting to note, for example, as shown in the Central Massachusetts Ebaseo study househeating customers which were 2,155 or 23½ percent of total domestic customers have now reached 28 percent. This same relative increase appears in most of the other companies. For instance, Lawrence which shows 7,955 or 25½ percent [885] in the Ebaseo study now has a saturation of 30 percent.

Although the figures shown in these reports are correct, in one year substantial changes have occurred, both in the swing of customers to househeating and in increased revenues.

Q. Is the form of organization as outlined by Ebaseo substantially correct? A. Yes. Their description of the organization is correct as of January 1, 1959. There have been some minor changes and modifications of organizations since that time, but they are not material.

Q. The Ebaseo reports include a payroll analysis at January 1, 1959. Are these correct? A. These have been verified and they are correct both as to the number of employees and base salaries and wages. Those shown in the column "Part Time" are employees on the payrolls of other companies also and the amounts shown represent the proportionate amount on each company. The amounts shown do not include overtime where applicable, or salesmen's commissions and bonuses, only base pay.

Q. Have you reviewed the executive, administrative and staff organization as described in Volume 1? A. Yes. Each description is only a brief summary of the duties. With the exception of the Treasurer, Assistant Treasurer and the Clerk, I have covered their duties in much greater detail in previous testimony. I have also covered, [886] in greater detail, the engineering functions. The summary of employee benefits is in accordance with our union agreements and System policy.

Q. How about production distribution and utilization? A. The summaries for these departments as set forth in the Ebaseo reports are correct. However, I would point out that, because of local operating conditions in our gas and electric companies, there are different procedures in almost every company. This can be due to the size of the company, the location of the operating departments, the number and type of gas plants and the equipment in use

in each company. These differences are described in the report.

Q. What about Treasury and Accounting? A. I am familiar with each gas company's accounting organization, and the descriptions and conclusions arrived at contained in the Ebasco report are completely correct.

Q. How about Other Activities? A. The Ebasco report outlines the facts pertaining to each company. Here again, operating conditions and local personnel and procedures vary. For instance, the size of Worcester County Electric Company justifies an insurance and medical group of five employees, which gives to the small Central Massachusetts, Wachusett and Northampton Gas Companies the benefit of this larger organization. In the Mystic Valley Gas Company, however, due to the fact that [887] both electric and gas managers are on the same floor and the Treasury Department is in the same building, these functions are carried on by personnel on the payroll of one company or the other.

Q. Will you now discuss that phase of the Ebasco report that deals with the effect of severance? A. As will be noted in each of the company sections, the effect of severance varies with each company. This is due principally to the size of the company, but other factors may also affect the cost of severance.

Q. What are these other factors? A. The cost of severance will be governed by many other conditions. If electric is now occupying gas owned buildings, rentals will be lost to the gas company and vice versa. Whether a company operates only in one small area out of one office, as do Norwood and Northampton, or operates out of more than one office, as do Wachusett and Central, will affect the separation.

On a larger scale, Lawrence Gas, occupying one office owned by the electric company, will incur a substantially

different cost than North Shore Gas with two gas company owned offices in Gloucester and Beverly and a rented office with the electric company in Salem.

Another item that will vary between companies is the separation of mobile radio equipment. This is no problem [888] in Mystic, as the electric and gas companies in Malden have separate towers, separate frequencies and separate transmitting facilities.

In Wachusett, however, the gas company, although operating on separate frequencies, shares the radio tower with the electric company.

In Lawrence, however, radio is a completely joint operation with one frequency, one tower and one transmitter for both companies. Another item is the cost of stores operation, where practices vary. Mystic and North Shore have completely separate stores at different locations, whereas Lawrence and Northampton, for instance, are in the same building and operate as one combined gas and electric stockroom. There are many differences in procedure in Treasury and Accounting, but I will pass these for another witnesses. The point is that each company's Pro Forma operation had to be considered in the light of existing and projected conditions as they pertain to that particular company.

Q. Have you considered the Pro Forma payroll in relation to existing conditions? A. I have, and in order to bring these Pro Formas into better perspective, I have summarized the actual payrolls at January 1, 1959 with the Pro Forma payrolls as projected in the Ebaseo reports.

[889] Q. I show you a sheet entitled "Personnel Analysis —Pro Forma as of January 1, 1959, Summary of Total Employees by Departments" and ask you to describe it. A. This schedule shows for each gas company the personnel at January 1, 1959, segregating part time and full time employees that are shown in the Ebaseo reports. It

also shows for each gas company the Pro Forma organization as prepared by Ebaseco. It is a summary of the personnel analyses of the Ebaseco report and is intended to bring these various analyses into focus in one place.

Q. Does it accurately set forth the information it purports to show? A. Yes.

Mr. Nowlin: Mr. Dalbeck, may I inquire, is this supplementary to the Ebaseco report?

The Witness: Well, it is not exactly supplementary to the Ebaseco report, but these are figures that have been developed from the Ebaseco report.

Mr. Nowlin: Well now, "pro forma", you mean by that gives effect to the separation of the properties?

The Witness: Yes, sir.

Mr. Quarles: I offer it as Respondents' Exhibit No. 70.

Mr. Nowlin: Mr. Dalbeck, may I ask one more question. We are not familiar with the Ebaseco report, which [890] I am sure you realize. As I understand it, there has been a study made of the separation costs incident to each individual company?

The Witness: Yes, sir.

By Mr. Nowlin:

Q. Then there has been a study of that that has been converted to the cost of separating, assuming that all of them are collective or combined, am I correct in that? A. Yes.

Q. And these figures here would only pertain to the individual cost of the separated companies rather than the combined companies? A. That is correct.

Q. There has been a study made of the separation cost of the companies, assuming they were combined, has there not? A. Yes.

Mr. Nowlin: Mr. Examiner, I will not object to it at this time, but I reserve complete freedom to question any items and to move to strike at some later time.

Hearing Examiner Ewell: I will receive it.

(Respondents' Exhibit No. 70 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Will you explain the differences between the actual [891] and pro forma? A. The differences, as you would expect, are principally in the Executive, Administrative and Staff group and the Treasury and Accounting group. Under our present operation there are many part time employees who are on the payrolls of more than one company, except in Lynn where the part time employees were all in combination with the electric department. In explaining this schedule it will be easier to follow if I defer the discussion on Lynn, since that is a special situation.

Q. Before discussing the differences between the actual and pro forma in the Executive-Administrative group, will you point out any changes in other departments. A. For the most part, the operating departments will continue to function with the same personnel as at present. Production, Distribution and Service and Garage departments reflect the same organization under the Ebasco pro forma statements as at present.

In utilization, Mystic Valley will have to add two employees. One is to replace the part time supervisors now in charge of the Service Order Center, this new employee to be classified as an Order Clerk and supervision to be assumed by present personnel. The other employee is the Utilization Engineer now in the Gas Division. Mystic with its 99,000 meters and 88 Utilization department employees [892] can certainly justify this type of an engineer. No other company can, however, and the valuable services he now renders to other gas companies in testing appliances, training service men, operating service schools and passing on knowledge of servicing new appliances would be lost to the other seven companies.

In Lawrence a Senior Clerk has been added in the pro forma organization to carry on the maintenance of meter records, shop testing and schedules for periodic testing which are now performed jointly with Merrimack-Essex. An additional employee has also been added in Central Massachusetts and Northampton for the same reason.

Under the New Business Department the present organization continues as is except for Mystic Valley. In Malden there is a combined gas and electric display department of four men and Mystic would require two of these in the pro forma. Certainly a reasonable number when it is considered that due to the larger territory gas has more stores than the electric.

In branch stores in Medford, Revere, Melrose and Everett, there are part time employees jointly with electric and to cover the stores (or comparable stores) would require three more full time employees. This is reflected in the Mystic New Business Department which now has, as shown on here, 55 full time employees, showing 60 [893] on the pro forma.

As can be seen from this exhibit, comparing present personnel with pro forma, it is apparent that in the local organization the greatest impact of separation of the gas properties will be in Customer and General Accounting. Where gas and electric customers are served jointly there is a very close coordination of gas and electric accounting. Customer contacts, meter reading, meter books, billing equipment, credit and collections and bookkeeping are all handled on a combined basis and the separation of gas and electric accounts will result in substantial increases in personnel, in space and in equipment. I am familiar with our present operations in the field of accounting and I am satisfied that the personnel in the Customer and General Accounting pro formas are substantially correct.

Q. Will you explain the part time employees? A. The employees shown on this exhibit as part time employees in the Executive, Administrative and Staff group include 14 employees who are Gas Division personnel in the Ebasco Report. In addition there are four part time Treasury employees in this group in Mystic Valley, five Treasury employees and a Personnel Director in Lawrence, the same in North Shore, plus a part time Safety Director.

In Central Northampton, Norwood and Wachusett at the time of the Ebasco report, a vice president was part [894] time in these companies. In Northampton, in addition, there were five Treasury personnel part time and a Transportation Supervisor. Norwood also has four part time Treasury personnel on their payroll. The full time personnel are in all companies, the then existing local operating executive, administrative and staff personnel.

Q. How did you test the reasonableness of Ebasco's projections of the Executive, Administrative and Staff group? A. I first prepared a summary of the pro forma personnel for each company. This enabled me to make comparisons of both number of personnel and money.

Q. I now show you a sheet entitled "Summary, Ebasco Report, Gas Companies, Personnel Analysis, pro forma as of January 1, 1959, Executive, Administrative and Staff, etc. Does it accurately set forth the information it purports to show? A. Yes. This is a summary taken from the Ebasco studies of each company showing in columnar form for each company the personnel included by Ebasco in the Executive, Administrative and Staff group.

Q. Was it prepared under your supervision? A. Yes, sir.

Mr. Quarles: I offer it as Respondents' Exhibit No. 71.

Mr. Nowlin: Mr. Examiner, subject to the reservation I just stated with respect to Exhibit 70, I will [895] not raise an objection at this time.

Hearing Examiner Ewell: I will receive it.

(Respondents' Exhibit No. 71 was marked for identification and received in evidence.)

By Mr. Quarles: Are you in agreement with the conclusion arrived at as to increased personnel? A. I am. As I have indicated, I participated in this study from the beginning and I am satisfied that the personnel shown in the Ebaseco report and summarized in this exhibit which has just been offered would be required.

Q. On what do you base this opinion? A. On my knowledge of the gas organization as it now exists, I am sure that the present local company personnel could not absorb additional duties of the kind now performed either by the Gas Division or the System as a whole. I have covered in our testimony the many functions performed above the local level and in order to do the work essential to a gas company operation additional executive, administrative and engineering personnel would be absolutely necessary to supplement existing employees.

Q. What check did you make on the size of the pro forma organization? A. First, I have had previous experience with straight gas companies and I have a pretty good idea of what organization [896] would be required for these gas companies, based upon their size in relation to other companies I have worked with.

Second, I have compared the Ebaseco pro forma organization with other gas companies in our area and I have found that the pro forma organizations are consistent with other companies and if anything on the conservative side.

Third, the total number of employees on these pro forma statements is consistent with the size, territory, type of gas plant operation and number of meters of these companies.

Fourth, when comparing the pro forma costs with other

Massachusetts gas companies, we compare very favorably and, in fact, still show in most instances lower costs.

Q. Are you in agreement as to the salaries shown on the Ebasco pro forma statements as summarized in this exhibit just introduced? A. Yes. The amounts shown for existing personnel carried to the pro forma statements are the rates at January 1, 1959. Added personnel in treasury and accounting are at rates existing at the time. Executive and administrative personnel have been conservatively estimated in relation to the pay of comparable individuals in other gas companies in the State. We know what those salaries are and in no instance are we excessive.

Q. Will you now review this exhibit and give us in [897] more detail the reasons for your agreement with Ebasco's conclusions? A. The size of each company is, of course, the dominant factor in the number of personnel, the responsibilities of the personnel and the salaries it would have to pay.

Salary amounts shown on the pro forma projections are consistent with comparable positions in the New England gas industry. Based upon my knowledge of other companies' salaries, these amounts are certainly not the maximum in relation to the size of the companies. In fact, there are smaller companies paying more.

Q. To be more specific, do you agree with the salaries shown for each president as summarized on this exhibit as taken from the Ebasco reports? A. I do. As I previously stated, the salaries should be commensurate with the responsibilities of the office and that is controlled to a large degree by the size of the company. My opinion, based upon knowledge of comparable salaries in other local utilities, with particular reference to Lawrence, Lynn and North Shore, is that these are on the light side. Mystic Valley is also shown at a lesser figure than other companies, but not to the extent of the others I have mentioned.

In the smaller companies, the amounts appear to be reasonable in relation to the size of the companies, but [898] I frankly doubt that qualified men could be found at these figures.

It must be borne in mind that each of those companies under separate management would place on these officers substantially increased responsibilities in the field of financing, accounting, engineering, relations with regulatory bodies, rates and many other functions now being carried on by NEES.

Q. How about the Vice President in charge of operations? A. In a company the size of Mystic this individual would of necessity relieve the President of many details he would be unable to handle, both on a day to day basis and on special projects that constantly arise.

He would have full charge of engineering, construction and all operating departments and would continue many functions now being performed both at the Gas Division and Service Company level. In Mystic he would not, in my opinion, have the time to devote to new business and marketing. However, in Lawrence, North Shore and Lynn, these companies being smaller, the Vice President would also have over-all responsibility for all sales, including industrial, commercial and special contracts.

In the four small companies you again face the problem of size and have the President, with what assistance he might get from even the engineer or General Superintendent, [899] would carry on all the duties of the President and Vice President of the larger companies.

Q. How about engineering? A. The organization of the pro forma Mystic Valley Gas Company includes seven engineers as compared to the thirteen engineering personnel of the present Gas Division. One of these would be in the Utilization Department and the others in the Executive and Administrative group. As Mystic represents about

one-half the total meters of the Gas Division (excluding Lynn) has four meter stations to receive gas from Tennessee, two LP Air Plants and an Oil Gas Plant, together with a complex distribution system, there is no question but what with current engineering problems and long range planning these would be the minimum required. Twelve engineers will be required in the other gas companies so the total engineering personnel requirements will be well in excess of the thirteen engineers of the Gas Division.

Hearing Examiner Ewell: Off the record.

(Discussion held off the record.)

Hearing Examiner Ewell: We will adjourn for lunch and reconvene at 2:00 o'clock.

(Whereupon, at 12:55 o'clock p.m., the hearing in the above entitled matter was recessed until 2:00 o'clock p.m. of the same day.)

[900]

AFTERNOON SESSION

2:00 o'clock p.m.

Hearing Examiner Ewell: We will resume.

Whereupon,

HAROLD L. DALBECK

resumed the stand and testified further as follows:

Direct Examination (Resumed)

By Mr. Quarles:

Q. What functions would the Personnel Department perform? A. Again referring to this exhibit, it will be seen that Mystic Valley is provided with a Director of Personnel and Assistant. In a company with over 400 employees, we know from experience that the problems involved in hiring, training and dealing with employees' problems, both on a company and personal basis, are exacting and time-consum-

ng. The time involved in labor matters as a result of negotiations and grievance procedures is substantial. Employee communications, medical assistance and safety, which are so important to the employees' protection also involve a great deal of time and effort. The records that must be maintained on personnel, relating to the employee history, progress, absenteeism, and health would be covered by this department. I am in complete accord with the Ebbaseo Study which includes a Personnel Group of this size in Mystic.

[901] Moving over to the other companies, no personnel department is provided for, but these duties would still have to be performed in Lawrence, North Shore and Lynn, under the direction of the Vice President, with details handled by the Executive or Administrative Assistant. In the four small companies much of this work would be handled by the General Superintendent.

Q. How about the General Superintendent? A. Each company now has a General Superintendent and, of course, under any operation, this position must continue. The rates shown for the four large companies are in line with present salaries paid. This appears to be in order, because the responsibilities of these men will continue about as at present. The rates projected for the small companies' General Superintendents are in order because, although they are higher than our existing rates, it must be borne in mind that on their own, as independent separated gas companies, they would have substantially increased responsibilities and duties, with no group to back them up on plant operation, maintenance, breakdowns, load estimates and forecasts and the many other problems that now get answered by a telephone call and a visit by experienced personnel from the Gas Division.

Q. Why is there only one local manager projected?
A. In the North Shore Gas Company we have offices in

[902] Gloucester, Salem and Beverly. Gloucester has an LP Air Plant and we maintain service and a distribution crew in that area. Accordingly, it is considered advisable to maintain in that district a local manager. This person would also sell commercial and industrial gas. No other gas company has this condition.

Q. Why is there included a Vice President in Charge of Marketing in Mystic Valley only? A. Here again it is a question of the size of the company and just how much other executives can do. This position, in my opinion, would have to be filled in Mystic Valley and I base my judgment on what I know of its present operations and on what constitutes the personnel of other gas companies. The negotiation of special contracts, dealings with the pipeline company, direction of the gas promotion and sales program in all areas would certainly require a highly trained and well qualified person in this, the second largest gas company in New England, and the largest in New England purchasing gas from Tennessee Gas Transmission Company.

I am certain that Mystic could not afford to be without such a position and it would require a salary no less than what Ebasco has allowed.

As we move on down in company size, it will be noted that no provision has been made for this position, [903] these responsibilities being undertaken in Lawrence, North Shore and Lynn by the Vice President of Operations and in the small companies by the President.

However, in these other companies, with the exception of Norwood, a Sales Manager would be provided. His duties would be the direct overall supervision of all classes of sales and the formulation of advertising and sales plans as determined by policies established by the President and Vice President.

Q. Mystic and Lawrence show in the Ebasco report an

Executive Assistant, and North Shore and Lynn an Administrative Assistant. Why the different titles and what would be their duties? A. In Lawrence the Executive Assistant is a continuation of an existing title. The same thing is true in North Shore and Lynn. Actually, their duties cover the same field in all companies. This position has to be added in the Mystic Valley organization. I have briefly outlined the duties of executives as they would perform in a separate gas company.

There are many problems constantly coming up that require special attention. Rate cases, hearings before FPC on pipeline matters, special studies involving research, all require the attention of a well qualified staff assistant who can be made available to assist any executive in the [904] formulation of future plans in research on rate, labor or regulatory matters and in maintaining day-to-day and month-to-month statistics or reports on subjects vital to his superiors. Certainly such an Executive Assistant would be an essential in those companies that are large enough to warrant such a person, and those four companies would, in my opinion, require such an individual.

Q. Have you any comments on Treasury and Accounting personnel? A. There is no question in my mind that the personnel assigned by Ebaseco in their reports will be required because of the split off of general accounting offices, the increased responsibility of treasury personnel in financing, stock transactions, tax matters, insurance placement and control, etc. These are now all performed by System personnel. The amounts for this personnel are reasonable.

I feel qualified to make this statement due to my previous connections with the Treasury Department. When consideration is given to the fact that from the Treasurer of NEES, who is also Treasurer of each company, right down the line through all staff functions of Treasury and

Accounting, each separated gas company would have to carry on and provide for these services for itself, it is evident that the impact of all these added responsibilities and duties will create in each company a substantial treasury and [905] accounting load. In my opinion, the treasurer, auditor, accountant, assistant treasurer-clerk, and chief accountant who are the personnel included in this pro forma study of Ebasco are a minimum.

In fact, in other than routine day-to-day financing and accounting problems most of the gas companies would have to go outside for consulting services on special problems such as auditing, stock and bond issues, rate cases, etc.

Q. In summarizing the Executive, Administrative and Staff personnel, what is your opinion of the end result?
A. When taking the total of the Pro Forma personnel and including estimated expenses and payroll taxes and fringe benefits, and deducting from this total the present salaries and expenses of the Gas Division, local office charges in some companies and Service Company billings, the net result, in my opinion, is reasonable and conservative. Increases, where they are included in the Ebasco reports, are most definitely conservative. To operate independently, separated gas companies with Executive, Administrative and Staff personnel, as assigned in these reports, would certainly be a minimum requirement, and I am sure that many advantages these companies now enjoy would be definitely lost.

It should be emphasized furthermore, that a comparison of the dollar figures for executives, administrative and staff personnel does not show the whole effect of [906] separation, since the pro forma executive, administrative and staff groups would not be able to perform all the functions now performed by existing personnel.

Q. Do you consider the estimated space requirements set forth in the Ebasco report to be sound? A. I consider

them to be sound. The amounts included in their reports are based on facts as of the date of their report. On the larger company owned buildings, both electric and gas, charges for space have been generally made on the basis of the total cost of operation allocated to each company in accordance with its use. Rentals paid on jointly used properties have also been based on the space occupied by each company.

The Ebaseo report has calculated costs for space of a separated company beyond that of buildings owned by the company, at \$2.00 per square foot for offices and stores, plus 75 cents per square foot for utilities and maintenance, and \$1.00 per square foot for garages.

Before construction of our own service building which we built two years ago or renting any new space, we checked the market on available structures, so we have a good idea of what rentals are in an area. Based on our experience and knowledge of space costs, I would say this is a conservative figure.

We made test checks to verify rental figures and [907] we agree with their conclusions that the method which they have used for costing space is reasonable. I have also considered the projected reallocation of space which would take place upon severance, and I am satisfied that the projections in this respect are sound.

Q. Have you any comment on increased insurance costs?
A. I have made no personal checks on insurance, I understand, however, that because of the increased amounts shown in each Ebaseo report these figures have been verified by Ebaseo, our own Insurance Department and independent brokers.

Q. How about other transportation costs under a separate operation? A. In those cases where garages have been operated jointly, it is certainly true that splitting of the companies will result in increased costs. Added to

this is the fact that with larger organizations at the local level additional auto equipment will be required, and I agree that the increases shown in the Ebasco reports for transportation costs are reasonable.

Q. Will you comment on professional services? A. In comparing the amounts shown in each Ebasco report for accounting services with those costs that are now paid NEPSCO for similar services they appear to be modest. Here is one place where company size does not make [908] much difference. Each company must file federal income tax returns, state excise and certificates of condition and have a complete audit. So the \$1,800 or \$2,000 increase for auditing expenses are certainly reasonable. As far as legal expenses are concerned, this certainly is subject to fluctuation. One lengthy rate case could take a large part of any allowance Ebaseo has made for legal services. Any independent company would certainly expect to pay more than at present for legal services because no one counsel could be as familiar with all phases of utility law and the companies as the combined knowledge of the NEPSCO Corporate Department. This alone would tend to increase legal costs in a single company.

I must say that what legal services will cost a separate company is a matter of opinion, but I do feel that Ebaseo's figures are moderate and reasonable.

Q. Will you comment on Miscellaneous Costs? A. None of the items mentioned in this group are substantial in amount. However, I have reviewed all of these reports and I am in agreement with their conclusions of present operations and their costs. Certainly both the gas and electric companies would have to increase their investment in office equipment.

A major item I can cite as an example is the Kardex customer history and service record now maintained jointly

at Malden for Mystic and Suburban, at Lawrence for [909] the two companies there, and at Northampton.

Each cabinet contains a slide with pockets, and in each pocket is the combined history record of each gas and electric customer. A separation of the companies using this record would require that each company invest double the amount of the present installations. This same procedure will result in increased billing equipment, increased bookkeeping desks, other desks, files and other equipment. I would, therefore, agree that the provision for depreciation is reasonable.

The same principle of increased costs will apply to telephone service. In every joint gas and electric operation one switchboard handles both gas and electric calls. As a matter of fact, one call from a customer who is moving results in a transaction affecting both gas and electric. Accordingly, there would be practically no change in the size of a switchboard, although individual stations in the office would decrease. Therefore, the amounts included in the Ebasco reports relative to combined operations are, in my opinion, in line.

Other miscellaneous costs, such as elimination of charges for the Mystic Valley Service School, printing of customers' bills, stock transfer costs, increased tabulation machine rentals and billing costs in Mystic Valley all represent services now performed jointly that would have to [910] be assumed on an individual company basis, although none of these do represent substantial increases.

Q. In your discussions of Pro Forma changes you have not explained the Lynn situation. Why? A. The transition from the Lynn organization at January 1, 1959, to the new Pro Forma gas company, represents different conditions than occur in the other gas companies. While each of the other gas companies was a separate and distinct corporate entity, Lynn, at January 1, 1959, was a combi-

nation gas and electric company. Accordingly, 274 of the total of 336 employees who devoted time to gas operations, were part time employees of the gas department who also allocated time to the electric department. The transition, therefore, from a combination gas and electric company to a separated gas company, represents a situation substantially different from other companies.

The Lynn Gas Company is now a separate corporate entity and the actual personnel now in the Lynn Gas Company actually coincides closely with the Pro Forma organization, as shown by Ebasco, in the production, distribution, utilization and new business departments. Accordingly, the Pro Forma gas company would continue to require the services now being performed by personnel now on their payroll.

In addition, if the Lynn Gas Company were organized to operate on a separated, independent basis, the same [911] assumptions would apply here as in other gas companies.

I have covered in some detail the organization that would be required in the seven Gas Division companies as compared with our present organizations. If you will refer to the Lynn Gas Company pro forma personnel, you will note that for the most part they coincide closely with the organizations proposed for the other companies, both as to number of people and salaries. In this connection, however, it should be noted that Lynn Gas is a larger operation than Lawrence or North Shore, so that some of the differences are accounted for by the larger size of the company. The only department that might require some explanation is the Utilization Department.

Lynn Gas is the only NEES gas company that installs appliances. This work in other companies is done by plumbers in the territory. That is the reason the Utilization Department of 49 employees looks a little large in

relation to these other companies. Total operating expenses, however, are not materially affected by this difference, as this expense in Lynn is payroll and in other companies plumbers' bills. Other than these comments, I think that what I have said on the Ebaseo study applies equally well to the Lynn Gas Company.

Q. Mr. Dalbeck, I take it from what you have said that your judgments as to the cost and effects of severance are [912] consistent with the results of the Ebaseo study.
A. Yes, that is so. I worked with Ebaseo on the development of the report and as we talked through and analyzed the various problems we found our judgments coincided. I know our present organization, as it operates on the local level, what the duties are and have a pretty good idea of the additional work that could be absorbed.

Also, being fully conversant with what the Gas Division does for the local companies and what NEPSCO does for both the Division and the local companies, I know what would be required in a completely separated gas company and what added personnel would, in my opinion, be required. I have also been familiar with the operations of other straight gas companies outside the NEES System, and I know what other gas companies now have for organization and how they operate.

My past familiarity with Treasury and Accounting operations both in NEES and in other companies, also gives me a good idea of what the requirements will be for an operation on an independent basis.

Q. Then you consider the Ebaseo projections on the gas companies reasonable? A. I do. In fact I think they are definitely on the conservative side.

Mr. Nowlin: Mr. Dalbeck, your last conclusions which you expressed were based upon a consideration of the [913] companies individually rather than collectively, were they not?

The Witness: That is correct, on a completely separated, independently operated company, on an individual company basis.

Mr. Nowlin: Mr. Examiner, I should like to inquire of Mr. Quarles at this time as to just why, or what is the purpose of taking up the individual companies and analyzing them before we get to the point of the consideration of whether they have one or more integrated systems.

Mr. Quarles: I undertook to cover that point in my opening statement, and I am sorry if I did not make it entirely clear.

As we analyze the situation with these eight companies, there is no basis on which we could assume that they would be kept together or that they would be one system, or two systems, or any other particular combination. We felt that the only firm basis for the initial analysis was to assume that each would be operated separately and would analyze it on that basis. We then, having done that, would take the next step of exploring what would be the difference if, instead of operating separately, a way could be found to combine them in a single system and operate them that way, and we do propose to put on evidence covering that alternative when we have completed analyzing it this way, [914] so that the staff and the Commission will have an opportunity to see it both ways and to compare the results on both theories.

Mr. Nowlin: Will the next witnesses that come on take up the companies individually, as Mr. Dalbeck has in his testimony?

Mr. Quarles: The next witness will, and then, as I mentioned earlier, there will be treasury witnesses that will cover the total situation as it is now. Then we will have the field people of Ebasco, who did the field work, testify with respect to their analyses on the factual basis, particu-

larly, and then, as I said, we will undertake to explore the combined situation.

Mr. Nowlin: I don't want to be in a position of trying to tell Mr. Quarles how to run this case. The reason I made this injury is that the Commission's original notice and order for hearing specified the issues, (a) or one, whether the electric utility assets of the New England Electric System Holding Company System constitute a single integrated electric utility system or more than one such system. Now, we have had hearings and that determination has been made, that they have a single integrated electric system. Mr. Quarles has stated that would be their retainable system if they had to elect between which one they would keep. Issue number two was whether the gas utilities companies [915] of the New England Electric Holding Company System constitute an integrated system, or more than one such system.

In the answer that respondents filed, the statement was made that they had a single integrated gas utility. The thought I had was that so far as I can see the evidence has not been addressed, first, to whether you have a single integrated gas utility system or more than one such system. If you have one single, integrated gas utility system, then it seems that the evidence should relate to that single system and apply it to the electric system, rather than on an individual company basis.

Mr. Quarles: Our position, I think, is quite simple. We have introduced evidence designed to show that at the present time, under common ownership and management, these gas properties are being operated as a unit, and in our opinion do constitute a single system. That, however, depends on the common ownership and the joint operation. If there should be, and I hope there will not be, an order requiring disposition of the gas properties, we do not know how they could be disposed of and what is now a single

system may not be capable of being operated in the future as a single system but may, in the process of separation, be broken up into two, three, or eight separate systems. So, we feel it is essential that we analyze it both ways.

In other words, we feel that we have presented and [916] are presenting, and will continue with the next few witnesses to present, sufficient factual information to warrant a finding by the Commission, if it is material, that as presently constituted and operated, the gas companies constitute a single integrated system.

Mr. Nowlin: That is the part is missed, Mr. Quarles, but I haven't seen anything directed to that point. Everything so far has been directed toward treatment of the individual companies.

Mr. Quarles: We have undertaken to show the way they are presently being operated right down the line, with our description of activities, functions, financing and operations. We have shown that they are close enough together to be capable of operation as a single unit. We have shown that in Mr. Dalbeck they have a single operating head, who is president of all of the eight companies at the same time, that he is in charge of the gas division of the System. It seems to me that we have gone quite a long way and will go further before the hearing is over in demonstrating that presently they constitute a single system.

Mr. Nowlin: What prompted my question was the question I just asked Mr. Dalbeck at the end of his testimony, that he was speaking of the companies individually rather than as an integrated system. In other words, assume that there was no difference between the staff and the company, [917] that you had one single integrated gas system, or one, and one additional system.

Mr. Quarles: Yes.

Mr. Nowlin: Then the testimony we are taking on the individual companies seems to me to be irrelevant.

Mr. Quarles: I disagree with you completely on that. Even if we assume that at the present time all can agree that they are a single, integrated system, it does not appear that they could be operated as a separate, single, integrated system once they were disposed of by New England Electric System.

Mr. Nowlin: You are mixing two cases and statutes. The Commission's cases and the courts talk about the loss of substantial economies or operating economies, not the sales economies.

Mr. Quarles: Do they refer to operating economies?

Mr. Nowlin: The court cases and the Commission's opinions do, what would be the operating losses, not the sales losses.

Mr. Quarles: We propose to show what all of the losses resulting from the attempted segregation are. As to which of those are to be taken into account and what weight is to be given to them, I suppose that is primarily for the Commission and ultimately for a court to determine, but we feel that the evidence that we are putting in here on [918] these various points is all relevant to the issue, first of all, of the present situation, the integration of the gas with the electric, in operation, the integration of the eight gas companies as a single integrated gas system, and ultimately to the problem of what losses would result from breaking up that system.

Mr. Nowlin: I don't want to anticipate your case. For example, you have the presidents here of eight operating companies. If they were combined as a single integrated operation, would you still have eight operating presidents?

Mr. Quarles: You will still have eight presidents.

Mr. Nowlin: You would have a president of each company?

Mr. Quarles: They might be the same person. Each company would have to have a president. But, as I said,

this whole section of our case is dealing with one of the two definite possibilities of what would happen on segregation, namely, breaking them up into eight separate operating entities. Then we come along and take the other extreme and assume operation of all of them as a single operation.

Mr. Nowlin: I guess that is what I would have liked to have heard first. I just wanted to make these notes. This is one thing that is causing confusion in my mind on some of these exhibits. In other words, you are kind of getting the cart before the horse. The first problem is to determine [919] whether they constitute a single integrated gas system collectively, and if they do not, whether they constitute one or two, and then relate those single integrated systems to your electric system, if there would be substantial operating losses. And I say those operating losses don't extend to the point where you may dispose of them.

Mr. Quarles: In order to visualize the losses, you have to visualize the severance.

Mr. Nowlin: You have got to first get something to decide what you are going to sever. Are you going to sever a single system or eight systems? I just make this point on the record. Maybe it will iron itself out, but I could follow this much easier if I could have known what your position was, that what you are attempting to establish is that you have one single, integrated system.

Now, after you have established whether you have a gas or an electric system, then you decide which is the principal system. You have stated that it is your electric system. The next thing is whether, in addition to New England Electric Company Holding Company System as a single integrated public utilities system, any of its additional gas or electric utility company systems may be retained under common control.

It seems to me the first thing is to determine the identity

of the gas companies. What are they? Next, [920] relate that to the electric system, see whether there would be substantial losses.

Mr. Quarles: Perhaps I have been in error. I had not thought that the order in which issues were set out in the order of notice had a bearing on the order in which the evidence would be presented or the issues taken up, particularly where the same evidence will bear so largely on all of the issues that are raised. Our thought was to present the necessary evidence for a decision of all of the issues in a way that would be, from our point of view at least, the most orderly and easiest to follow.

I am awfully sorry that our approach to it was different from the one that you would have used. I think it isn't a matter of tremendous importance whether you first consider them as individual and then as a group, or first consider them as a group and then as individual companies.

We wish, in any event, to have in the record all of the necessary facts for them to be considered by the Commission both ways and to enable us to present arguments before the Commission as to how they should be treated in the event of segregation.

Mr. Nowlin. Well, we certainly are in unanimous agreement on the relevance of a proper record. The statute itself fixes the pattern, because it says "required to limit to a single integrated system." "The Commission shall permit [921] a registered holding company to continue to control one or more additional integrated public utility systems if such additional or segregated systems . . ." I don't know whether you claim you have eight or one integrated systems. If there is one, then the question is whether such additional integrated system can be operated as an independent system, not independent of each but as an independent system. But you go ahead. I wanted to explain to you why I have had some difficulty with some

of the exhibits and the Ebasco report, because it is kind of like putting the cart before the horse. If I knew what your integrated system was that was going to be forthcoming, then there would be no need of giving the individual information on the companies. If there are going to be eight companies, then there is no need to take them individually.

I am certainly not trying to foreclose you putting in anything that is relevant. I do have trouble taking up these individual companies without having first decided whether you have one or two integrated gas systems.

Mr. Quarles: Our position is that presently, in our opinion, we have one integrated gas system. That is not, however, essential to our case here, if the Commission should determine that we have two or more. We have endeavored to produce evidence establishing the fact that there are economies and justifications for continuing to retain one [1922] or more. Again, I am sorry that I didn't make it as clear as I thought I had in my opening statement that our position was as I have just now stated, that presently there is the one or two systems, but that that is not necessarily the same as they would be in the event of severance, because, in the process of severance from NEES, there would also be severance from each other.

Mr. Nowlin: Well, Mr. Quarles, then if you say there is one single integrated gas utility system, suppose the staff were to unanimously agree with you, would you proceed then to put the testimony in on the individual companies?

Mr. Quarles: That is kind of an "iffy" question.

Mr. Nowlin: It might be nearer than you think.

Mr. Quarles: I would certainly be prepared to consider it. We are pretty well along with the presentation now.

Mr. Nowlin: How many more witnesses are you going to put on on the individual companies?

Mr. Quarles: The witnesses from here on aren't divided

between evidence relating to the present situation and the present integration and relating it to this particular thing. Most of the testimony from here on relates to the preparation of the report, the findings on the material, and I wouldn't be able now to estimate how [923] much of that is devoted to the question of eight versus one. I would say that the time that we would save in doing that would be rather small as compared with the time that would be lost in reconstructing it and undertaking to set it up on a different basis.

Mr. Nowlin: May I inquire, do you plan to call Mr. Dalbeck, for example, to testify on the combined relationship of all the companies?

Mr. Quarles: Yes, sir.

Mr. Nowlin: Suppose we go ahead and proceed, Mr. Examiner, but I think you can see a little bit of the confusion that has been running through my mind, whether some of these things are relevant or not.

Mr. Quarles: If, in the effort to present all of the evidence that could possibly be relevant to this we have overstepped in some respects and have presented too much material, I am sorry.

Mr. Nowlin: I am not asking for apologies, Mr. Quarles.

Mr. Quarles: My point was not to make an apology. I am glad to make it, but that wasn't my point. My point was that the introduction and the receipt of irrelevant material is not an error under the rules, as I understand them. It is taking up some of your time and some of my time, and some of the time of other people, but aside from that loss [924] of time, no harm has been done, because an expert agency such as the SEC can certainly sort out what is material to it as they apply their theories of what should be done here.

Mr. Nowlin: I think you are right, if you don't go too far afield.

Mr. Quarles: We will try not to go too far afield. If you think we are, just pull the cord and we will try to come back in. Your reference of putting the cart before the horse, you know quite a few of the new automobiles have the engine in the back.

Mr. Nowlin: Only one that I know of made in this country, the Chevrolet.

Mr. Examiner, we have, among ourselves, several notes that we thought were clarifying, but I think we had better wait for Mr. Dalbeck to come back on the stand.

Hearing Examiner Ewell: You will defer questioning him until later?

Mr. Nowlin: Yes. We had several points. Every time I write a question down here I wait a little while and get an answer to it.

Mr. Quarles: Maybe that has a bearing on the prolific case that we have been putting in and the possible justification.

Mr. Nowlin: I don't know whether it is that or my attentiveness to the witness.

[925] Hearing Examiner Ewell: Well, are you going to excuse this witness now?

Mr. Quarles: I will ask to have Mr. Dalbeck excused subject to recall later.

(Witness excused.)

Mr. Quarles: Mr. Examiner, I would like now to call Mr. Leigh FitzGerald, who has not previously testified in this proceeding.

Hearing Examiner Ewell: Very well.

Whereupon,

LEIGH FITZGERALD

was called as a witness for and on behalf of the respondents, and having been first duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Quarles:

Q. Please state your name and business address. A. Leigh FitzGerald, 441 Stuart Street, Boston, Massachusetts.

Q. What offices do you hold? A. I am Assistant to the President and Secretary of New England Electric System, am a Vice President of New England Power Service Company, Lynn Electric Company, and Granite State Electric Company, and a director of the latter.

Q. Will you describe your business background? [926] A. Following graduation from Princeton University in 1935 with an AB degree in economics and history, I worked two years for the John Hancock Mutual Life Insurance Company in Boston.

In 1937, I started work with what is now New England Electric System as a student engineer in Providence, Rhode Island, for the Narragansett Electric Company. During the next two and a half years, I worked for varying lengths of time in merchandise sales, meter, plant accounting, right of way, general accounting, and overhead lines offices.

The next two and a half years I spent as an assistant in the office of Narragansett's Vice President and General Manager, Mr. Webster, doing a wide variety of things. These included preparation of operating estimates and analyses of actual results for Narragansett, The Mystic Power Company, and the Rhode Island Power Transmission Company.

In 1942, I was transferred to Boston as Executive Assistant in the office of Mr. Webster who at that time was System Vice President, in charge of retail gas and electric company operations. Ever since then my duties have kept me in pretty constant touch with System-wide operations in general, but especially with the retail electric side. I have occasion to visit the System properties from time to time and talk frequently with local managers and operating

[927] people in the field, or in the Boston office, or over the telephone. I also make it a point to visit and compare notes with non-affiliated companies in New England and elsewhere.

From time to time I have the statistical record of other companies checked to pick out situations reasonably comparable to our own that are showing good results. Following up on these helps us keep abreast of new ideas and the best thinking in various aspects of the electric business. Of course, we also have an excellent opportunity to compare results between the different operating units within our own System in a similar way.

In the past, I have been a member of the Statistical Committee of the Edison Electric Institute and the Research and Statistical Committee of the Electric Council of New England. Both of these have been interested, among other things, in regional and intercompany cost and performance comparisons.

Q. Will you please describe your present duties? A. I assist the President, Mr. William Webster, in a variety of matters as assigned from time to time. These include periodic review of current activities and operating results of System companies and looking ahead to future problems and opportunities. I work closely with the personnel director on management development, organization and salary; [928] administration policies and procedures. I also review proposed construction projects and the resulting Capital Expenditure Budget. I keep score on various System-wide activities such as corporate contributions, memberships and dues paid to outside organizations and the personnel representing the System on trade organization committees.

At present I still spend about half my time assisting the System Vice President for Management, Mr. Krauss, who has recently taken on this assignment. My last pre-

vious assignment was as assistant to his predecessor, Mr. Nock.

Q. I show you a bound volume containing individual maps of the service areas of Lynn Electric Company, Merrimack-Essex Electric Company, Northampton Electric Lighting Company, Suburban Electric Company, and Worcester County Electric Company.

Q. Would you please describe it? A. The maps depict the service areas of the five electric companies which operate jointly in at least part of their territory with affiliated gas companies. In the cases of Suburban Electric Company, Lynn Electric Company, and Northampton Electric Company, each has a single joint operating center serving substantially the whole electric and gas territory. In no one of these three companies are the electric and gas service areas co-extensive. In the case of Suburban, 84 percent of its total electric customers [929] are supplied with gas by Mystic Valley Gas; in the case of Lynn Electric, 77 percent are also served by Lynn Gas; and in the case of Northampton Electric, 61 percent are also customers of Northampton Gas.

Only just over half the customers of Merrimack-Essex Electric Company are serviced from local offices where joint operations are carried on—Lawrence, Beverly and Gloucester. The balance are taken care of through straight electric offices at Lowell, Haverhill, and Amesbury. As a result, only 35 percent of Merrimack's electric customers are also supplied with gas by affiliated companies—North Shore and Lawrence. Worcester County Electric Company has 20 operating units ranging from single isolated service crews through four district centers to the Worcester headquarters. More than two-thirds of its customers are covered by straight electric operating units. Only 9 percent of all its electric customers receive gas from affiliates—Wachusett and Central Massachusetts.

Comparison of these maps with that in Respondent's Exhibit No. 52 will show the overlap of electric and gas franchise areas for these five companies on a geographic basis.

Q. Was this prepared by you or under your supervision?
A. It was.

Q. Does it correctly set forth the information it [930] purports to show? A. It does.

Mr. Quarles: I will offer it as respondent's Exhibit No. 72.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit No. 72 was marked for identification and received in evidence.)

By Mr. Quarles:

Q. Since the electric companies were described in considerable detail during the 1957 hearings, I will ask you only to indicate whether there have been any significant changes in them? A. Since that time there have been no substantial changes in the territories served. There has been substantial growth in volume of business and plant investment, but no changes that appear material in this proceeding other than the separation of Lynn Gas and Electric Company which has already been mentioned. There have been the normal retirements, promotions, and new hirings in the organization, and some realignments of duties and responsibilities, but again, nothing that appears to be important in this proceeding

Q. Are the effects of gas severance limited to the five electric companies you just mentioned? [931] A. No. These five companies are only the ones where there are extensive joint gas and electric operations. In addition, Quincy Electric Company, Northern Berkshire Electric Company, and Southern Berkshire Electric Company par-

ticipate to a minor extent in joint treasury activities with affiliated gas companies.

There are also certain costs presently shared among the electric and gas companies for functions performed by New England Power Service Company. To the extent that these cannot be reduced as much as the current billing to the gas companies, expenses shared among the 14 electric companies would be increased. I understand that these items will be described more fully by later witnesses.

Q. You have heard Mr. Dalbeck explain the losses of economy to the gas companies from severance. Would the effect on the electric business be significant?

Mr. Nowlin: Mr. Examiner, I am going to object to that as being irrelevant to the issue of the effects of the loss of economies to the gas system. The Commission has held that the loss of economies, as reflected in Clause (a) of Section 11(b) relates to loss of economies to the gas system rather than to the electric system.

Mr. Quarles: Mr. Examiner, we will press for the answering of that question, because we feel that the natural meaning of the statute would include losses sustained by the [932] entire situation, that there is no logic in differentiating between the loss sustained by the retained and by the segregated portions.

Hearing Examiner Ewell: I assume you mean in the public interest?

Mr. Quarles: In the public interest. Certainly Congress was interested in investors and consumers. There has been at least one case, which we will brief later, if desired, in which it has been held by a Circuit Court of Appeals that losses to the retained should be taken into account. If you take the position that you look only at the losses to the system that is separated and not to losses to the retained, you have the anomalous result of whether there are sub-

stantial losses depending on which happens to be your principal system.

Hearing Examiner Ewell: Has the Commission passed on the point in any of its decisions?

Mr. Nowlin: Off the record.

(Discussion held off the record.)

Mr. Nowlin: Why don't you defer ruling on this until tomorrow morning and I will try to find the cases?

Hearing Examiner Ewell: I would be inclined to overrule it at this point for this one question. If there is going to be a series of questions—

Mr. Quarles: There is, and there are going to be [933] exhibits.

Hearing Examiner Ewell: I would want to look into the matter further. You say there will be a series of questions on this point?

Mr. Quarles: There will be other questions on the matters that bear on losses to the electric company. There has been only one Court decision, and that was in the Fifth Circuit in 1956, which held that the losses to the retained electric system should be taken into account.

Mr. Nowlin: What case was that?

Mr. Quarles: I am under the impression that the Commission's position has been, in each case, that varying amounts of weight might be given to it, or that little weight might be given to it, but I am not familiar with any Commission decision ruling that evidence as to losses to the retained system was not admissible. That doesn't prove that there aren't any.

Mr. Nowlin: What was the case you are talking about?

Mr. Quarles: Louisiana Public Service, Fifth Circuit, 1956. I am not familiar with any Commission decision which excluded the evidence.

Hearing Examiner Ewell: Would it be convenient for

you to pass this area for the time being, and go into something else and we will take it up in the morning?

Mr. Quarles: It goes into quite a little bit of [934] our evidence, and irrespective of the Commission's previous decision, we would press for admitting this evidence. It is relevant in this situation, whether or not it has been relevant in cases previously before the Commission, for three different reasons.

In the first place, we maintain that under the statute it is all losses of economies that ought to be given consideration. In the second place, it is relevant to the determination of the loss experienced by the gas company, because you have a total, overall situation, and the allocation between the two is important in determining how much loss is sustained by each. Therefore, and if we assume for the moment that it would not be open to us to rely on the loss of the electric, we should be permitted to show it as bearing on what the loss of the gas is. In the third place, it is relevant in this particular situation, because here a very substantial percentage of the customers of the gas companies, to which we are referring, are also customers of the affiliated electric companies, and any loss to either will fall on the same, and that has a bearing, we maintain, on the substantiality of the loss. What is substantial loss of economy in one case may be very different from what it is in another.

Our position is that, in view of our situation and of this tremendous overlap and the loss falling from either [935] side on the same people, a smaller loss should be regarded as substantial than in a case where they were entirely separate. So that our position is and will be that this is relevant and admissible evidence. We would ask for a ruling on it and hope to go ahead with the presentation of our case.

Hearing Examiner Ewell: Well, it seems quite persua-

sive to me, in absence of a definitive holding by the Commission of a contrary nature.

Mr. Nowlin: I suggest you pass it. There are five of these cases. I have before me American Light and Traction Company, the North American case, and the Philadelphia Company case.

Hearing Examiner Ewell: I think it would be better to pass it, if you can, and go ahead for something else.

I will reserve ruling on it for the time being and you can go on with something else.

Mr. Nowlin: If you do that, I would like to have a standing objection to any question to be asked about the impact on the electric company.

Mr. Quarles: May we go ahead with this witness along this line, and if you wish to move to strike later on, you may do so.

Mr. Nowlin: I understand the Examiner has [936] reserved a ruling?

Hearing Examiner Ewell: That is what I wanted to do, unless you want to take it subject to a motion to strike at a later time in the event you prevail in your argument.

Mr. Howlin: I am objecting to it, and you reach your decision.

Hearing Examiner Ewell: I will take it subject to a motion to strike.

Mr. Nowlin: Mr. Examiner, I found one of the cases I had here. It is Philadelphia Company 28 SEC, and the quote is from Page 52: "We think it clear that the losses in economies which may be considered under clause (a) are limited to those directly related to the additional system sought to be retained." Footnote 30 cites the North American Company, 11 SEC 194, 200 (1942), North American Company vs. SEC 133 FED 2d 148 (CCA 2d 1943), 327 US 686 1946. See also the legislative history discussed supra page 13. That was the authority for my objection.

I will say this, that the opinion goes on and apparently says—suppose I read it: "The foregoing computation is made, however, merely to point out that our overall conclusion with respect to clause (a) would not be affected even if we were to consider the claimed increased expenses for both the gas and electric systems, since the comparative relationship of the total claim to total [937] revenues, expenses and income decreases the significance of the claim . . ." In other words, the Commission made the flat holding but still went on and said we computed it and it didn't amount to anything because it has an insignificant effect anyway.

Mr. Quarles: Was the evidence excluded in that case, or doesn't that rather indicate that it was actually received and considered?

Mr. Nowlin: Well, the point is that it may have been received before the Commission ruled, but the Commission has ruled here. As I said, we think it clear that the losses in economy which may be considered under clause (a) are those directly related to the additional system sought to be retained. Since the evidence apparently got in, the Commission went on to say "even if we had considered it", but the holding is that it directly related to the systems sought to be retained.

Mr. Quarles: I would submit that is not the holding, that that is obiter dictum in that case.

Mr. Nowlin: The case cited in the Supreme Court as authority for that holding.

Mr. Quarles: I would want opportunity, if I may, to brief it and to refer to the Court decisions in the matter, before you ultimately rule.

Hearing Examiner Ewell: Is that the Louisiana [938] case that you mentioned? Was that an integration proceeding?

Mr. Quarles: Yes.

Hearing Examiner Ewe Can you get the citation on
that?

Mr. Quarles: That is Louisiana Public Service Commission vs. SEC 235 Fed. 167, 5th Circuit 1956. That was, I believe, reversed other grounds when it got to the Supreme Court, but in the Circuit Court where this was the issue, the Court said further: "While we recognize the merit of respondent's intention that the interpretation placed on the law by the agency enforcing it is persuasive, no one will contend at it is not the duty of the Court to construe the Act of Congress, even if such construction differs with long accepted administrative policy." But I would suggest, in interest of saving time, that we each submit a memorandum in support of his contention, and the Hearing Officer will rule on it in due course.

Mr. Nowlin: I don't see any need to submit a memorandum. We have cited the case and the Supreme Court decision, from my viewpoint.

Mr. Quarles: I would like to have an opportunity to read the case.

Hearing Examiner Ewe What do you think would be the effect on this case? What effect do you think that will have on this other case?

[939] Mr. Quarles: The Supreme Court decision he is referring to is not relevant to this case. That has to do with the constitutionality of the Act.

Mr. Nowlin: The case cited by the Commission in support of its conclusion,

Mr. Quarles: I think both of us would do well to have an opportunity to mine the authorities a little more closely on it, and since we have already put in some of this evidence, subject to your reservation of the right to move to strike, if the Hearing Officer ultimately decides that it is inadmissible, might proceed. Otherwise, if your Honor would prefer rule now—

Hearing Examiner Ewell: Well, I am a little confused as to why the Circuit Court would have held in a way contrary to a holding of the Supreme Court.

Mr. Quarles: The Supreme Court case, sir, did not cover the point at all. The Supreme Court case was on a different issue, as I understand it.

Mr. Nowlin: I do not have the court citation, but this case did go into court in the Third Circuit, but I can supply that. This is the only Commission decision I am reporting from, but I know this case went into the Appellate Court. Whether this issue itself was raised, I don't know.

[940] Hearing Examiner Ewell: Well, I think we ought to pass the matter until you have had an opportunity to read the case and cite any portion that can clarify this. We can still go on, I think, and take it subject to a motion to strike it. I will strike it out if I am convinced that that case is requiring it.

Mr. Quarles: Will you repeat the question?

(Whereupon, the question was read as follows by the reporter:

"You have heard Mr. Dalbeck explain the losses of economy to the gas companies from severance. Would the effect on the electric business be significant?"

The Witness: Yes, it would, although the amounts are somewhat less. Obviously in relation to revenues they will be much less in companies where joint customers are a small portion of the total. Mr. Dalbeck has described in detail the principal joint gas and electric operations, both the functions and the numerous locations. What happens on the electric side in general would be just the other side of the same coin. Holding down investment, manpower and expenses to a minimum consistent with adequacy of service is very important for an electric utility. Joint operation of appropriate functions of the electric and gas business is

one of the means employed by NEES to hold down costs. [941] Climate, terrain, land values, fuel prices and many other factors combine to make the electric business expensive in New England. As a result, our rates run in the order of 15 percent to 20 percent above the average for the nation as a whole. Our service area already averages over 500 people per square mile, so we cannot look forward to the same rate of customer growth to offset inflationary costs as in many other sections of the country. Our growth must come more through adding large-volume uses in an established territory. These big uses center around the use of electricity for heating, water heating and house heating in particular. Such uses, of course, are directly competitive with costs for gas, oil, or coal heat. Any further unnecessary rate increase because of loss of economy of joint operation would be an additional handicap to growth and ability to combat rising costs.

Q. Would gas severance require any major organizational changes on the electric side? A. Certainly not on an overall basis. However, in the case of Worcester County Electric Company, and to a lesser extent Merrimack-Essex Electric Company, we have some individual local joint operating units which are pretty small. In the event of severance of the gas portion of these, the remaining electric organization would become very thin and marginal, economically speaking. The electric company would not abandon [942] its local offices in these areas as this would impair local standards of service and certainly hurt public relations. In our territory, the cities and towns have long histories and strong local pride of independence. The county is of minor political importance. The township is dominant, or the city. The population has long since become accustomed to first-class electric service maintained promptly from a nearby base. Both the general public and their representative authorities resist removal of service centers

to larger, but more distant locations. Local pride, service and property tax benefits are all involved. Joint operation of gas and electric service has produced volume to support retention of local service in many instances where it would otherwise be questionable.

Q. Would you, from your acquaintance with retail operations, please describe the principal functional areas where savings are achieved through joint operation? A. Savings to the electric business from joint operation may be grouped under (1) space occupancy, (2) direct local supervision, (3) operating personnel, (4) specialized equipment, (5) large volume transactions, (6) sharing of professional and specialized services, and (7) mutual backup and emergency resources.

Q. What sort of thing would you include under space occupancy? [943] A. Obvious opportunities for savings exist through joint occupancy of floor space in office buildings, service buildings, and garages. Items of cost which can be shared on a mutually advantageous basis under these circumstances include heat, light, janitorial service and building maintenance, watchmen and other building security measures, telephone switchboard service, first aid rooms, rest and lunchrooms, auditoriums, vaults for safeguarding of records, parking lots and storage lots, and perimeter fencing. Rentals and building services contribute a large part of the increased expense to electric operations from separate as compared with joint operation.

Q. What do you mean by the classification direct local supervision? A. There are functions where identical or very similar activities have to be carried on locally for both gas and electric operations and which can readily be supervised by a single individual. This is a great help in the small to medium sized operating areas. Good direct supervision can be provided for both gas and electric operations at a cost shared roughly one-half by each. It is

particularly appropriate in such activities as (1) garage, (2) stockroom, (3) meter records department, (4) customer service order, (5) cashiering, credit and collection, and (6) customer billing. I am referring to situations where the supervision [944] involves primarily work assignment, supervision of performance, and training of routine workers.

A good example is the supervisor of meter records at Lawrence. This record keeping is fundamentally identical for both gas and electric, differing only in the details recorded. It is an important record. Accuracy is necessary, both from the need of fairness to the customer and to the company, and because of the specific regulatory requirements on the frequency and the results of meter tests. On the other hand, it is a small operation requiring only three clerks. The turnover rate for clerical help is high, both from girls leaving the employ of the company and from their bidding on a seniority basis for higher rated jobs. A permanent direct supervisor to maintain standards, train newcomers, and in turn provide continuity and control is highly desirable. The benefit of this supervision, however, can be obtained for the gas and electric jointly at about the same cost as for one of them alone.

Q. You also mentioned operating personnel. Would you please enlarge? A. This is the largest general area of loss of economy from abandonment of joint operation. There are many jobs where gas and electric work can be performed simultaneously with little more time or effort than either the electric or the gas job by itself alone. You have [945] heard examples from Mr. Dalbeck. The electric meter of a customer who is terminating his service is read out by the same man who shuts off the gas service. Routine meter reading is one of the biggest opportunities for economy through joint operation. Cashiers, bill deliverers, messengers and mail boys, watchmen and in some cases

telephone operators, secretaries and janitors are further examples.

There is a slightly different situation where the electric and gas work are essentially identical, and people can be used interchangeably between the two operations to take advantage of the diversity between the work peaks in each. Most clerical jobs fall in this class, also key punch operators and collectors, and others.

Still other jobs require 24-hour coverage, but in the off hours afford spare time which can be used to advantage for other operations. For example, electric substation operators sometimes can be set up to take trouble calls for both electric and gas; so also with garage attendants, trouble operators, and others.

Q. Specialized equipment was an item you included. What about this? A. There is a rather wide variety of specialized equipment which is necessary but normally is not used to anything like full capacity by either electric or gas alone. In cases where this is useful to both departments, there is [946] an obvious economic benefit from sharing a single piece of equipment between the two. This sharing is frequently done on a pretty informal basis. In the construction line, there are such items as air compressors and drills, and pole trailers which may also be used for carrying gas pipe. In the stores area are such things as motor trucks for transporting and delivering materials, fork lift trucks and cranes. In the garages there are various pieces of repair equipment which are used to full capacity only in the larger operations.

In the accounting area there are all sorts of machines and equipment such as calculators, billing machines, postage meters, addressograph machines, kardex customer records and the vaults in which they are contained, reproduction equipment, and many other things. Other examples

are first aid equipment, safes and vaults, gas detectors and masks, and shortwave radio.

Q. What is the significance of large volume transactions?
A. Purchases of materials and services for various areas and departments can often be combined to produce a larger single transaction and consequent savings. For example, system-wide blanket insurance coverage can be purchased for casualty, public liability, Workmen's Compensation, group health, accident and life, group annuity, Blue Cross and Blue Shield. In some cases the savings are reflected directly in the initial premium schedule; in other cases [947] they become available through an experience dividend. Quantity discounts are substantial, either formally expressed or in situations where the volume of business available simply encourages the vendor to use a sharper pencil. This is particularly so in the area of fleet discounts, stationery purchases, office furniture, and gas and electric appliances. An attempt is currently being made to pool all System purchases of gasoline with attendant savings. Combined volume of newspaper advertising in Lawrence gave \$2,100, or ten percent saving over separate billing for the year 1959. Almost endless examples of this sort could be cited.

There are also many System activities where the expense of distributing materials and services to larger groups adds relatively little more cost. Publishing 8,000 copies of an employee magazine obviously would run very little more than 6,500. The cost per employee of health examinations such as were given in 1959 by a traveling medical unit would have been materially higher but for the concentration of employees in the areas where both gas and electric employees were examined at the same time. Supervisory, safety, and general employee information meetings can usually include both gas and electric employees in an

operating area at no more cost than for either gas or electric alone.

Q. What do you mean by sharing of professional and specialized services? [948] A. There are advantages to both the gas and electric operations from sharing the services and cost of high calibre professional and specialized personnel who are both expert in their own field and at the same time familiar with System facilities, problems, procedures and personnel. Many of these are in regional headquarters, such as the district treasury organizations; others are in the various departments of the Service Company. Their fields include such things as financing, insurance, tax accounting, legal services, rate services, safety, personnel, labor relations, and medical services.

Q. Since other witnesses will go into these areas, I will not ask you to comment on them further. Returning to the local scene, what significance do you attach to the presence of an affiliated gas organization as backup and emergency resources. A. A sister affiliated utility can be freely called upon in times of emergency for help and can be counted on to respond. Its personnel are right on the spot and time is not lost while they are being assembled and transported in; they know the streets, the local people and any local problems; usually they belong to the same labor union. Materials and equipment can be borrowed back and forth. Cars or trucks with radios can quickly augment the fleets of either company and multiply the effectiveness of their manpower.

[949] Following sleet storms such as those of March 14 and March 20, 1958, extra vehicles which can communicate with headquarters are invaluable for reporting the location and kind of trouble, transporting extra manpower and materials to the places where needed, and generally speeding service restoration.

The electric organization, of course, can reciprocate too.

For example, a few years ago an overhead supply gas main in Clinton was accidentally broken by a snow plow. When such a thing happens, lots of manpower is needed immediately to shut off each individual customer affected and prevent formation of an explosive mixture of gas and air in the pipes before the supply can be restored to the mains.

We are not talking here about widespread disasters such as a hurricane when, of course, we would have to call in large amounts of outside help from a distance. In such circumstances you operate on a wholly different scale. You have to set up a guide organization for out-of-town crews, housing facilities, check with unions involved, and do all the other things necessary to such an operation. Fortunately, a crisis of this degree rarely happens. In the intermediate size of crisis which hits only a limited portion of the System at a time, the local reinforcements about which we have been talking are of very special value.

Q. Does this give the full score on advantages of [950] joint operation? A. No. It does not take into account the very important advantages of membership in a larger organization. They show up in many different forms. For example, you can get along with a thinner organization at many different points than would be prudent if you were entirely on your own. This happens at each operating location where gas and electric reinforce one another.

For example, an experienced manager in one operation can steady a neophyte in the other while he learns the new ropes. As a matter of fact, many of our people have had both gas and electric experience during their careers and can pinch-hit or give advice with authority in either field.

Quite aside from such purely local reinforcement, greater opportunities exist for individual advancement in a larger organization. People are better developed by maximum challenge and more apt to get into jobs well adapted to their abilities. In this way a stronger organization is pro-

duced throughout. As I just said, there are quite a few of our people who have gone back and forth from gas to electric jobs or vice versa once or more in their careers. This broader opportunity helps also in recruiting college technical graduates in competition with top paying industries all over the country. From the 68 men [951] hired as students the last ten years will come the bulk of our top engineers and management people fifteen to twenty years from now.

It is through ability to attract people of this caliber that we can continue to provide for customers with the good service at the low cost. Incidentally, five of these recruits are currently gaining experience in gas company jobs. This program was especially valuable to the gas group in its leaner days prior to the coming of natural gas. Basically, however, the broadening to the individual from experience in a different field is just as valuable to the electric organization. Other advantages of the sort I have referred to show up repeatedly through our operations.

Q. Are electric sales and promotional activities operated jointly with gas? A. No. Electric sales promotion is headed up in Boston by the New England Power Service Company Vice President, Electric Sales Promotion. Sales managers in the electric operating properties report functionally to the Boston Sales Department, and administratively to their respective local electric managements.

Q. How does this differ from the gas division setup? A. In the Gas Division, as you may recall from Mr. Dalbeck's testimony, the sales promotion function is headed by a Sales Promotion Manager, in Malden, who reports [952] directly and exclusively to the Gas Division President. At the local operating level each gas sales manager reports to a local gas manager who is a separate individual from the local electric manager.

In many combination gas and electric companies through-

out the country, sales promotion is a combined activity. New England Electric System electric sales promotion is completely separated from gas, and the two are highly competitive.

Q. Please describe the electric group a little more fully.
A. Electric sales promotion is carried on by an organization of 265 employees, 189 of them in Massachusetts and all but 16 based on operating locations in the field. In general, sales promotion strategy, coordination and control is centralized, while detailed tactics and supervision is left to the field forces. There are two major subdivisions of electric sales promotion headed respectively by the power sales manager and the merchandising manager in Boston.

In addition, three smaller groups specialize on advertising, area development, and agricultural development—the first two located in Boston, the latter with headquarters at Clinton, north of Worcester, Massachusetts.

Q. What does the power sales group do? [953] A. Power Sales Departments maintain continuing contact with all large industrial and commercial electric customers. They report back expansion plans so that the distribution and production facilities required can be planned and built ahead of need. They promote new and increased use by all sizes of commercial and industrial customers for lighting, cooking, space and process heating, power and other applications.

In these activities they encounter lively competition from gas company salesmen, especially in the fields of commercial cooking and water heating, unit space heaters and industrial process heating applications.

Q. And the residential group? A. Residential sales promotion activities fall largely into two groups—merchandising and promotion. In the larger field operations these are separately supervised. The merchandising group is engaged principally in sale of household appliances direct to

electric customers at their homes or in company stores where smaller traffic appliances and light bulbs are also sold. Appliance salesmen are compensated on a salary plus commission basis. Here again, of course, intense direct competition from gas salesmen is encountered, especially for range, water heater, clothes drier and refrigerator sales. The promotional group concentrates on educational and developmental work—on [954] adequate wiring with architects and builders, on retailer and contractor relations, on rewiring and larger service capacity for older houses, on "all-electric" housing developments, and electric house heating.

Cooking demonstrations, appliance and general promotional advertising and window displays support both these groups. Appliance servicing may be under the immediate supervision of merchandise or the distribution department, but in any case works in close liaison with the merchandising group.

Q. Would you say sales and promotion are pursued aggressively? A. Yes. There is constant effort to improve performance of the various sales groups. Contests are set up between comparable electric groups based on achieving or exceeding established quotas. These are usually organized in campaigns of limited duration, such as eight or 13 weeks. Rivalry among merchandise managers is stimulated by a monthly ranking for their departments based on three factors—quota achievement for dollar volume, for kilowatt hours used, and for inventory control.

NEES electric sales promotion avails itself of training courses and promotional materials of the Edison Electric Institute, other trade associations, and of equipment manufacturers. Members of the power sales staff [955] regularly attend courses designed to prepare them to compete aggressively with their gas company rivals in fields such as cooking, space heating, and industrial processing.

Since 1952, twenty-five of the power sales staff have attended the Culinary Institute's electrical cooking school, and thirteen the Industrial Electrification Council's heating school, to mention only two of those courses.

Additionally, NEES electric sales promotion participates in local electric leagues of appliance dealers and electrical contractors. It also benefits from participation with national programs, such as Better Light, Better Sight, Housepower, Live Better Electrically, and Bronze and Gold Medallion All Electric Homes. At present a wiring allowance of \$50.00 is made to builders of a Bronze Medallion Home. To qualify as such, the home must have an electric range, three other major electric appliances, 100 ampere service entrance, not less than twelve separate circuits and minimum lighting level.

For Gold Medallion Homes the allowance is \$175.00. The requirements are the same as for Bronze Medallion except that electricity must be the sole heat source, there must be an electric water heater and the service entrance must be 150 amperes. The builder also may use the prestige of the Medallion in his advertising.

In addition, from time to time we offer wiring [956] allowance to people who install electric ranges or water heaters in place of units using a competitive fuel. This is not done on a continuous basis because it is felt that the impact of a limited period offer is greater, particularly in view of the cost.

Local advertising and sales efforts are coordinated with national magazine, television and radio advertising campaigns, and gain manyfold in effectiveness thereby. This is especially important in recent years in the face of the aggressive gas promotion and competition in this area since the arrival of natural gas.

Q. How about this competition on a practical, day to day basis in NEES? A. Competition between gas and electric

sales groups is not restricted by NEES. It goes on side by side on 17 joint sales floors. At present common display floors are used, divided roughly half electric and half gas, with typically a central aisle leading to a cashier's counter where customers may pay their gas and electric bills at the same time.

Advantages in lesser cost, convenience to customers, and increased floor traffic are recognized by both groups. For the most part, this results merely in more aggressive selling by each, more total sales by each, more energy use, and better living for the customer.

[957] Q. Do you feel NEES System electric sales activities are effective? A. Effectiveness of NEES System electric sales promotion is attested by the 62 percent growth in use per customer between 1952 and 1959, and by the good showing of System companies in nation-wide contests sponsored by Edison Electric Institute, national manufacturers, regional distributors, and others.

Q. Did you take part in the severance study? A. Yes. I participated in early meetings when the approach was being planned and looked into problems relating to the study with local management and operating people as well as Boston office and Ebasco people.

In addition there have been a number of detailed round-table reviews of the losses of economy, including requirements for space, personnel and other costs and services in which I have taken part. In general, I have paid particular attention to the problem arising from severance of the gas business on Merrimack-Essex Electric Company, Lynn Electric Company, Suburban Electric Company, Worcester County Electric Company, and Northampton Electric Company. Of course, I am familiar with the general organizational structure and physical layout of the operations in question.

Q. Do you feel this report presents an accurate picture

of the electric operations affected by severance? [958]
A. Yes. It contains an accurate, though much abbreviated description and tally of personnel, space and other requirements for the electric operations involved in joint activities with gas at January 1, 1959.

Since that date, there have been the normal quota of retirements, promotions and replacements, but no substantial changes such as would impair the study as a measure of the loss of economy to the electric operations through severance of the gas.

Q. Have you considered whether all the additional expenses of the electric companies in the event of severance are included? A. I think we have a fairly complete story on the actual out-of-pocket cost increases that can be anticipated at this time. However, anticipating all the stresses and requirements for two separate organizations which have so long been integrated at so many points is not an easy task. Utilities have to be manned adequately for the daily work flow, but they also must be prepared in experience, training and depth of manpower for varied, unexpected emergencies. The more familiar one is with capabilities and limitations of particular individuals, the more questions and doubts arise as to the adequacy and self-sufficiency of two groups on respectively narrow bases compared with a single group on a broader base. Not all these things can be expressed in [959] monetary terms.

Q. What do you think of the validity of the pro forma costs and requirements? A. I think they are sound. At any given moment in a System the size of ours with the large number of operating units involved, there is a gradation of local situations with respect to the relationship between work loads on the one hand, and manpower, space and other items of capacity to do work on the other.

This situation is constantly changing—there is steady growth of volume of business, but also there are improve-

ments in methods, equipment and organization from time to time that increase ability to perform more work. At any one time some locations are tight on manpower or space, others have a little slack, while still more are just about in balance.

When you hypothesize a radical change such as we are proposing here, it would be unrealistic to end up with a tight situation everywhere, or an easy one either for that matter.

Nevertheless, I would say we have bent over backwards to the extent that our pro forma manpower in particular is pretty generally on the tight side. Usually in practice there turn out to be problems that were unforeseen.

Q. Did you do any testing or probing of the pro forma [960] provisions? A. Yes, indeed. I explored and reviewed many of them.

Q. Could you give a specific example? A. Certainly. We have mentioned the practice of having the gas serviceman when he goes out to shut off a customer who is discontinuing service at the same time read out the electric meter.

After severance, of course, a special trip will have to be made by an electric man. I reviewed the reasonableness and consistency with which this was handled in different locations. One of the early proposals called for the addition of two electric metermen third-class in Malden for this added work, but none in Lawrence and the North Shore District.

The number of combination customers involved in each instance was 67,000, 33,000 and 24,000 respectively. After further discussion with local operating people, we decided that by revising their procedure, Malden could in the pro forma organization reduce their added requirements to one man instead of two.

In the other two companies, local electric operating people feel that there is less than an additional man re-

quired in any one place, and that they can absorb the added work without adding a man at any spot.

Q. Did you apply any other kinds of tests? [961] A. Yes. I tried to be sure we had looked into all reasonable alternatives. There were three additional trouble operators called for in the pro forma organization of Merrimack-Essex at Lawrence, Mass. This was to maintain 24-hour coverage which is now maintained jointly by two Merrimack and three Lawrence employees.

Mr. Casey, the local manager, and Mr. Allen, the local superintendent, agreed that 24-hour coverage was needed. We then reviewed the alternative means of accomplishing this. A plausible alternative seemed to be to route calls to substation operators at either of two substations during off hours, as is done in some other places.

This proved impractical, however, in view of an imminent project to make one of these two automatic. Supervisory control of the one would then be added to the duties of the substation operators at the other. In time of trouble they would not be able to handle all their substation duties, calls from the public, and dispatching of trouble crews at the same time.

In addition, a duplicate radio base station would have to be installed at the substation which is remote from the Methuen Street service building where troublemen and records are based.

Q. Were there other kinds of things which you looked into specifically? [962] A. Yes. I looked into situations where a job requires a man of high caliber and ability pretty much regardless of the volume of work. He can do the job perfectly adequately for both the gas and electric companies, but neither one alone can get along with a less capable person. The outstanding examples of this type are in the treasury field where there are extensive joint electric and gas operations.

I am thinking of such people as assistant treasurers, auditors, and chief accountants. I am sure the treasury witnesses will mention some of these when they comment later on the treasury and accounting organization.

An example in another department is the personnel director of Merrimack-Essex who can now provide guidance and supervision in this line for Lawrence Gas and North Shore Gas, as well, but would need to be the same calibre man for Merrimack-Essex alone, even though his coverage were slightly shrunken by severance of the gas.

Q. Was there any other area of this study to which you paid special attention? A. Yes. There is the whole matter of space requirements. When you are dealing with people you can only add or subtract a whole person, and the judgment problem becomes whether or not the changed work load is of sufficient magnitude to make such a change. Superficially, you might expect space requirements could go up and down precisely, [963] square foot by square foot, as the work load increased or decreased. As a practical matter, of course, this is absurd. In the first place, when a gas operation moves out, the work load does not necessarily decrease correspondingly. There may be nearly as many readers, billing clerks, and many others as before. If you count some of these as previously on the gas payroll, there will be actually more electric employees required and correspondingly more electric space.

In addition, something in the order of 20 percent of the space in a building is normally taken up by common use areas—corridors, stairways, washrooms, heating plant, and the like. In other words, when the gas moves out, instead of half the space being made available, it is much more apt to be only 25 percent to 35 percent.

Q. Why couldn't the joint space utilization continue on the present basis? A. It is unthinkable that unaffiliated companies would mingle operations involving customers,

money and vital records. Therefore, the question comes whether it is feasible to rearrange operations so that the surplus portion of the space can be made suitable for rental to an outsider. The cost of doing this must be compared to possible rental revenue.

In general, our office buildings were designed [964] and are laid out for combined operations. Most of them cannot be readily adapted to subdivision. Many of our service buildings are old converted generating plants or mill buildings which present the same kind of problem. The market for these properties is limited. In only a few cases did we find that a gain could be made by building now or by renting smaller quarters.

At Lynn it was found necessary to build a new stockroom adjacent to the electric distribution operating quarters and electric power plant. In Salem and in the case of four of the five branch stores in Suburban, provision was made for moving to smaller rented quarters.

Q. Have you made any attempt to test the reasonableness of the end results produced in the Ebasco report?
A. Yes. I have made some checks to be sure the end results reached were within reason. There never is precise comparability between any two companies. The more deeply you probe, the more obvious this becomes. Nevertheless, you can get some reasonably reliable measures. I am satisfied that the costs added to the NEES electric companies in this study give results which are in line with costs of other companies operating in this area. In fact, they would still be on the low side.

Q. Does the Ebasco Report, in your opinion, give a full measure of the loss of economy to the electric companies [965] in the event of gas severance? A. No, it couldn't possibly do so. It sets forth on a pretty conservative basis the out-of-pocket additional costs due to severance of gas after the new ways of doing business are established and

shaken down. It mentions but does not quantify the substantial expense and division of effort which would be necessary to revise systems, procedures and records to a straight electric basis.

Hearing Examiner Ewell: When you speak of the Ebasco report, you are referring to Exhibit 58?

Mr. Quarles: Yes, sir.

Hearing Examiner Ewell: I thought so, but I just wanted to be sure it is not some other report.

Mr. Quarles: No, it is the one that is held in suspense.

The Witness: It cannot begin to indicate the subtle but nonetheless real weakening of the individual operating units located around the System. This is something which cannot be measured in dollars and cents.

By Mr. Quarles:

Q. Do you feel that severance of gas would lessen the efficiency of the electric companies? A. Yes, I do. Joint operation of these local operations has been practiced successfully for years. It works well; it is efficient and it makes sense. Abandonment [966] now would be disruptive to the organization, confusing to the public, and result in greater cost to the consumer in the long run, with no offsetting advantages to justify it.

Mr. Quarles: I have no further questions to ask of this witness and ask that he be excused subject to recall for cross examination if desired.

Mr. Nowlin: I have no objection.

Hearing Examiner Ewell: All right; I think we will take a short recess now.

(Whereupon, a short recess was taken, after which the hearing was resumed.)

Mr. Quarles: Mr. Hearing Officer, I would ask the privilege of having Mr. Dunn, who is associated with me in this case examine the next witness.

Hearing Examiner Ewell: Certainly.

All right, Mr. Dunn; you may proceed.

Mr. Dunn: I will call at this time Mr. Krause. He has already been sworn in this case.

Hearing Examiner Ewell: Mr. Krause testified in the previous hearing?

Mr. Dunn: Yes.

Hearing Examiner Ewell: All right.

Whereupon,

R. F. KRAUSE

was called as a witness for and on behalf of the respondent, [967] and having been previously sworn, was examined and testified as follows:

Direct Examination

By Mr. Dunn:

Q. Do you still have the same position and responsibilities you had at the time of your earlier appearance in this proceeding? A. No. At the time of my testimony in this proceeding on November 19, 1957, I was president and director of New England Power Service Company.

As of November 30, 1957, I resigned those positions and became president and director of New England Power Company—the electric wholesale subsidiary of New England Electric System. In that position I had special responsibilities in engineering, purchasing, construction and operating areas.

Effective September 1, 1959, I resigned as president and director of New England Power Company and became vice president of New England Electric System, and assumed wide responsibilities in the general area of management, employee and community and regulatory relations for both retail and wholesale operations.

Among other things I became responsible for the follow-

ing functions: retail management, coordination of distribution operations, sales promotion, labor relations, [968] medical, personnel, rates and safety. My responsibilities cover both the electric and the gas business. Early this year in connection with the change in the organization and conduct of the business of New England Power Service Company, I became a vice president and director of that Company, retaining my position with New England Electric System.

However, my functions and responsibilities remained the same. On December 22, 1959, I was elected a director of the Narragansett Electric Company.

Q. Mr. Krause, referring to Respondent's Exhibit 53, which is the functional organization chart of the NEES holding company system, are you the individual that now fills the position entitled "Vice President Management"? A. Yes.

Q. In 1957 Mr. Webster testified that he had special responsibility for retail company management which was then exercised through Alfred V. Coleman, a Vice President of NEES. Is this responsibility now under your jurisdiction? A. Yes. I am not only responsible for many of the areas where Mr. Webster then operated, but in addition I am responsible for the areas in which Mr. Coleman operated and have the responsibility for certain of the departments of the Service Company.

Q. In referring to retail company management, do you refer to both electric retail companies and gas retail [969] companies? A. Yes. They both come under my jurisdiction.

Q. It was previously testified in connection with the system's electric business that approximately half of the plant investment and three-quarters of the employees of the NEES system companies were engaged in "retail-type" operations, that is, operations other than production and transmission. Is such true of the retail gas companies?

A. In the gas retail companies the proportion of plant investment and the number of employees engaged in such operations would be even greater. This is because natural gas, which represents the great bulk of our gas, is purchased rather than produced or generated, as in the case of our electric business, and because it is not necessary for our gas companies to engage in long distance transmission.

Retail-type operations include the distribution of gas, the promotion of its use, the collection of its revenues, and the administration of the gas business as a whole. About 80 percent of the gas plant investment and more than 90 percent of the gas employees are in retail-type operations. Of course, during the relatively short time each year, when gas is being produced for peak-shaving or other purposes, production personnel are augmented by drawing from the distribution forces. But, in general, I would characterize our gas distribution business as being [970] principally that of a retail operation.

Q. Is the extent of your supervision over the gas business about the same as that exercised over the electric business? A. In general, my supervision of each would be about the same. However, in certain areas my supervision of the gas companies would be only in matters of broad policy. For example, distribution problems and engineering for gas are generally different from these for electricity. With the gas division set up in Malden such matters can be centralized at that point and there is no need for coordination and standardization between the various regional areas such as occurs in connection with our several regional electric organizations.

Accordingly, coordination, standardization, etc., are handled at Malden. In another area, that of sales promotion and merchandising, in order that the gas business and the electric business may each be developed to its full potential, it is essential that the sales promotion and

merchandising organization for each be operated independently.

In general, the Gas Division is given a free hand in this area. So far as supervision of electric sales promotion and merchandising is concerned, that has been largely delegated to a department of the Service Company [971] headed by a Vice President. My activity in this area is to make sure that sales promotion is being actively and competently carried out by both gas and electric sales departments.

Q. At the time of the 1957 hearings, Lynn Gas and Electric Company was a recent acquisition by NEES and it had not been integrated into the NEES functional organization. Has such integration now taken place? A. The assimilation and integration of a new subsidiary into the system is a slow process. However, we have made considerable progress.

As of the first of this year we have separated Lynn Gas and Electric Company into two corporations, the Lynn Gas Company and the Lynn Electric Company. The President of the Lynn Gas Company is Mr. Dalbeck, the executive head of the Gas Division and the President of all the other gas companies.

The President of Lynn Electric Company is also the President of Suburban Electric Company. Progress is being made in the integration of Lynn Gas Company into the Gas Division and the Lynn Electric Company into the electric regional operation.

Q. Mr. Krause, would you describe in some more detail how retail gas operations are managed? A. As in the case of the management of the retail [972] electric companies, we can simplify the problem by breaking it down into four elements. First, there is the problem of gas supply; second, the problems of financing and accounting; third, the matters relating to engineering and other specialized technical

services; and fourth, the category of "everything else"—retail operations.

This latter includes operation and maintenance of distribution facilities, relations with customers and employees, regulatory matters and public relations. In the first of these categories the responsibility for gas supply rests with the Gas Division in Malden.

The second category, namely financing and accounting, should be broken into two parts. Financing in general is handled by Mr. Hanson and his staff, located in Boston. As the chief financial and accounting officer of the system, Mr. Hanson is treasurer of each of the gas companies, except Lynn.

In the accounting area, such is handled by the District Treasury organizations which in turn draw on the Service Company for audits, systems and methods and many other specialized services.

With respect to the third category, engineering and specialized technical services should be split. Generally, engineering is handled at the Gas Division headquarters; specialized technical services are handled by the Gas Division headquarters or are requested of the Service Company.

[973] Q. That leaves, Mr. Krause, the fourth category, namely everything else—the so-called retail operations. Would you describe gas management activities in this area?

A. As in the electric end of the business, the local manager has broad powers in a wide range of activities including those directly affecting customers and employees as well as community relations.

In the electric end of the business there are regional executives between the local managers and the central organization Vice President for Management. On the gas side, the Gas Division headquarters with its executive head

and his assistant in charge of management occupy a comparable position to that of a regional electric executive, but there being only one Gas Division headquarters in lieu of several regional electric organizations, I have no problems of standardization and correlation between various regional gas groups.

Q. I would like to consider in greater detail certain areas of your supervision, but first of all, would you tell us the composition and role of the officers and boards of directors of the various gas companies? A. Each of the gas subsidiaries has its officers and board of directors. The president of each company is the chief executive officer, responsible to the Company's board of directors. The directors act upon matters of major [974] policy.

Q. Mr. Krause, do members of the Gas Division participate in system-wide committee and managerial activities? A. Yes. Gas men do participate in the system activities such as the safety committee, personnel activities, student training activities, the building committee and treasury and accounting activities. The head of the Gas Division participates in staff meetings of the regional retail managers, and gas men participate in system committees set up for special activities.

An important example of the latter is in connection with the periodic labor negotiations. A special committee is established to negotiate new labor contracts with a view to obtaining uniformity throughout the system. A gas man would be a member of such a committee. Generally speaking, the gas people participate actively whenever it will be mutually helpful.

Q. Would you give an example of an active part that you play in the management of retail gas operations? A. I believe a good example would be in the area of personnel. I actively supervise placement of personnel, establishment of salary scales, labor relations, recruitment, training,

medical and safety programs for both the electric and the gas businesses.

Q. Tell us in more detail of the recruitment and [975] training programs. A. The future of any business enterprise is dependent to a great extent upon good recruitment and training programs for personnel at all levels of responsibility. The larger the scale on which this can be done the more each particular company within a system such as ours benefits.

Accordingly, a system-wide recruitment and training program under my supervision is in effect. First of all, we assess the future technical and executive personnel that will be required in our business, both gas and electric, many years ahead. From this assessment we set up an annual quota and then go about recruiting both from colleges and other sources the type of young people that will be needed to develop into the qualified and able executives and technicians we need.

Obviously the Gas Division itself, which is roughly only 15 percent the size of our total combined gas and electric business, could not afford the scope and type of program which we have on a system-wide basis. And the fact that we are large and have a variety of positions into which men will be placed assists us in attracting the man we want.

With reference to our training program, this also has been described in some detail by Mr. Webster in the 1957 hearings; but briefly we have a training program for new employees which lasts from six months to two years. We try to give the trainees working assignments in various [976] divisions of the system, both gas and electric, and in both operations and management. This gives the trainee an opportunity to see the various aspects of our business and it gives us a chance to observe their abilities in various areas. This helps materially in the proper placement of the trainees on a permanent basis. It also gives the trainee

the feel of the system as a whole and a knowledge of system thinking and methods.

Q. Does the training end with the termination of the training period? A. Oh no. Training and experience continues so long as a man is working within our system. There is constant moving of personnel at all age levels as positions open up through promotions, retirements and death, etc. This permits the advancement of personnel with ability into various areas of operations and enables them to acquire broad experience.

We also run technical courses which the employees may take, and we often send men to college for specialized education in new areas to broaden their background.

Q. After the training period, is there much shifting of personnel between the gas operations and the electric operations of the system? A. Subsequent to the training period there continues to be rotation of the jobs between the electric and the gas divisions, but in some areas more than in others. For [977] example, engineers and production men who attain experience and training in the gas business or in the electric business tend to become specialists in one or the other and their greatest value is to stay within the business in which their abilities show up.

On the other hand, particularly in treasury and accounting areas and in executive and administrative areas, the gas business is not materially different from the electric business and the interchange of personnel within these areas has definite advantages.

For example, the first head of the Gas Division was taken from an executive position in electric operations and then, after a period of years, was transferred to head the retail electric operations in Rhode Island. To sum it all up, as a large system we are able to get and to hold higher caliber men for the gas company positions than would the gas companies by themselves.

In addition, key positions in many areas of the gas business can be quickly filled as vacancies occur without the long individual training and consequent expense that would generally be required if the gas companies were independent of the NEES system.

Q. How are system policies handled with respect to capital expenditures in the gas business? A. At the beginning of each year an estimate of [978] capital expenditures, usually for a year in advance, is prepared by the Gas Division headquarters against the backdrop of system policy in planning, the availability of money and the availability of engineering and construction forces and material and supplies. This estimate is developed within ground rules which are of equal application to the electric business and the gas business, but of course the availability of gas engineering and construction forces and of gas materials and supplies is pretty much governed by the judgments of the Gas Division.

As in the case of the electric business, the retail companies maintain what is called a continuing capital budget which is in the form of a looseleaf booklet divided into a "scheduled" and "unscheduled" section.

There is a separate sheet in the budget for each major gas project and information with regard thereto. The "scheduled" portion of the budget includes those items expected to be undertaken within a year; the "unscheduled" portions consist of major projects which are foreseen but not expected to be undertaken within a year. All of this makes it possible for the Boston office to maintain reasonable standards of consistency with respect to reliability of both gas and electric service and to the scheduling of new projects so as to be within the available resources of the system.

Q. Do you and your staff in Boston have responsibilities [979] in the maintenance of the gas distribution system and

the handling of emergencies thereon? A. In general, the maintenance of the distribution system and the taking care of emergencies are handled by the Gas Division headquarters, but again within standards of reliability of service, etc., which are set up on a system-wide basis. But I am consulted as to matters of major policy.

Q. Please tell us more of your executive activities in connection with the promotion of sales and appliances, both gas and electric. A. As I have already indicated, it is our firm belief that consumers and investors, as well as the companies themselves, benefit from aggressive independent promotion of each of the businesses.

Accordingly, wide latitude is given to the Gas Division in the promotion of gas sales and appliances and likewise wide latitude is given to the men in charge of electric promotion. They are free to develop their own promotional policies, they have their own promotional organizations, they develop their own advertising, etc. In general, they are completely independent of each other and they actively compete with each other as well as with outside competitors. The gas and electric people develop their own budgets for promotion, and though they are submitted [980] to me for review, the extent of my review is to insure that they are consistent with good utility management.

In connection with the electric promotion, plans and budgets, they are developed by the Sales Promotion Department of the Service Company, in cooperation with the regional electric managers and their staffs.

Q. What is your role in community relations? A. In general, community relations are the responsibility of the local managers, whether it be in the electric end or in the gas end of the business.

However, the handling of community relations does not raise problems unique to either the electric or the gas business. They are usually very similar, if not the same.

Accordingly, through system-wide meetings, system policies can be developed and the experience of any given local manager, whether gas or electric, can be passed on to the others. In this way a more effective job can be done in the area of community relations than could be done by the gas companies operating by themselves or by any grouping thereof.

Q. Can a dollar value be placed on this type of cooperative effort? A. No. This is one of those many intangibles which members of a large system enjoy but which cannot be reflected in a study expressed in dollars—such as the Ebasco report which has been introduced in evidence in this proceeding.

[981] Q. What about relationships with regulatory authorities, both state and federal? A. Though the Gas Division headquarters handles effectively and economically many of the routine relations with the State commission pertaining to the gas business, in other areas where such relations, though vitally important, are infrequent, the central organization can be of considerable assistance.

For example, in rate proceedings and in financing cases, on a system-wide basis we have a frequency of rate and financing cases which keeps personnel of the Central Organization active a considerable portion of the time.

For each gas company or even for all the gas companies as a group, this type of activity would be so infrequent that any substantial number of personnel devoted thereto would not be justified. Another area in which this would be particularly true would be in connection with mergers, consolidations, formation of new utilities, etc. On the federal level the Gas Division, with assistance from system lawyers does handle the activities before the Federal Power Commission in connection with its gas supply but the financial problems, not only under the Holding Company Act but also under the Securities Act of 1933 and the Trus-

Indenture Act of 1939, are handled by the Central Organization, which has a constant load of work in those [982] areas. My participation in the regulatory activities of the Central Organization is an active one and I can be of great assistance to the gas companies in their routine business with regulatory commissions.

Q. In conclusion, do you feel that the entire gas business of NEES is managed as a unit? A. Very definitely. The management setup of the NEES system gas business, as described not only by me but the prior witnesses in this proceeding, to whom I have listened, is that which you would expect to find in a single corporation.

Though there is considerable de-centralization with respect to local management, in other areas, where it is beneficial, centralization exists, particularly in the Gas Division at Malden and the central organization in Boston and in the district treasury organization.

The size of our gas business and the compactness of the geographic locations of the areas served make it possible for our gas business to be run as an efficient unit within the NEES system. Although the gas companies are not in themselves self-sufficient, the NEES system provides the reservoir of men, materials, services and supplies, enabling it to do an efficient and reliable job.

Q. Would you briefly summarize the benefits the gas business enjoys from being operated as a part of the NEES system, as you see them? [983] A. Being part of the large NEES system, the gas companies enjoy the economies of joint operations, particularly in the customer service and accounting area and in the executive and administrative areas; they enjoy the financial strength of the system as a whole and they enjoy the higher caliber of management and administration which can be only justified by a system the size of the NEES system.

Q. Mr. Krause, a description of the Service Company

has already been given in this proceeding, and, for the record, I might state it is found at pages 237 to 263 of the transcript. Have there been any substantial changes in various departments of the Service Company since 1957?

A. There have been some realignments, particularly in the treasury and accounting areas, but no substantial changes.

Q. The 1957 description was given in connection with the electric integration phases of these proceedings and, accordingly, the description related primarily to the electric operations. Would you tell of the organization of the Service Company with reference to gas operations? A. In most departments of the Servicing Division of the Service Company, the expert services available are of such a nature that they are of equal value to the gas business. In such departments no further specialized training is required of the personnel in order for them to perform services for the gas business as well as the electric business. [984] A recitation of the names of the departments in the Servicing Division is enough to indicate that this is so. These departments are the tax department, the corporate department, the publications department, the personnel department, the labor department, the safety department, the plant accounting and depreciation department, the insurance department, the medical department, the rate department, the purchasing and stores department and the treasury department, the latter also including specialized general accounting and audit as well as system and methods.

However, in order to avoid restraining of competition between the gas and the electric business, the sales and merchandising department of the Service Company is limited to the electric business. The Gas Division of the holding company system has its own sales promotion and merchandising staffs.

A review of the services billed by the Servicing Division to Massachusetts gas companies during the calendar year

1958 shows that all of these departments, with the exception of the sales and merchandising department, provided substantial services for the various gas companies.

Q. With respect to the Engineering and Construction Divisions of the Service Company would you tell of their organization and operation with reference to the gas operations? [985] A. First, as to the Engineering Division, the gas business does demand a degree of specialization from the engineers who perform work for the gas operations. In order to service the eight gas companies within the New England Electric System holding company system, there is a chief gas engineer with a staff of engineers and assistants under him. This particular group of people is located at the Malden headquarter's office of the Gas Division. They formerly were part of the Service Company, but when gas and electric management were separated it was decided that because of the specialized nature of gas engineering it would be more practical and economical to locate the gas engineers within the Gas Division offices in Malden.

At the same time they were transferred to the payrolls of the gas companies, though they could have remained on the payroll of the Service Company without affecting their services performed for the Gas Division.

Accordingly, the Gas Division during the test year 1958 called on the Engineering Division of the Service Company only for miscellaneous services such as blueprinting, minor drafting, fire insurance valuations, real estate services and minor engineering.

With respect to the Construction Division of the Service Company, it does some construction for the gas companies at their request, but the bulk of their construction [986] is let out to independent contractors. However, the Service Company can and does provide a peak labor force which

the gas companies themselves would not be able to justify on a year-round basis.

Q. I show you a sheet entitled "New England Power Service Company—Summary of Services Billed—Excluding Massachusetts Gas Companies—Year Ended December 31, 1958" and ask whether the information given thereon is accurate and true to the best of your knowledge and belief? A. It is.

Mr. Dunn: I offer it as Respondent's Exhibit No. 73.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: It will be received.

(Respondent's Exhibit No. 73 was marked for identification and received in evidence.)

By Mr. Dunn:

Q. Mr. Krause, referring to Respondent's Exhibit No. 73, which has just been received, and also to Table III at the rear of the Service Company section in Volume 2 of the Ebaseo Report, Respondent's Exhibit No. 58-B, do the two taken together show the total 1958 billings by the departments of the servicing division of the Service Company? A. They do. They also show the relative size of the billings by such departments to the gas companies as compared [1987] to the total billings to the other companies serviced by the Service Company.

Q. Mr. Krause, do the 1958 billings by the Service Company to the gas companies reflect the full value of the Service Company to the gas companies during that year? A. Definitely not. During 1958 there were no unusual activities which could not be handled in routine fashion by the Gas Division personnel plus normal services of the Service Company.

However, if the Gas Division had a major rate case during the year, a proceeding such as the one in which we are now participating today before this Commission, or some other activity of such a nature that the maintenance

of a regular staff to handle it could not be economically justified, substantially greater services would have been requested of the Service Company.

The 1958 billings do not reflect the continuous availability of the large group of highly trained and specialized personnel of the Service Company. To obtain comparable services from non-affiliated accountants, rate experts, lawyers, etc., would cost the gas companies substantially larger sums than they would have to pay the Service Company, which operates at cost in accordance with the rules and regulations of this Commission.

Q. Could the gas companies, assuming they were [988] independent of the New England Electric holding company system, provide for themselves a comparable body of trained specialists through some service company or other mutual arrangement of their own? A. No, not to any such degree as the present Service Company offers. The maintenance of a large group of specialists such as are found on the Service Company payroll is justified only if their services can be fully utilized. It is obvious that the gas companies, which together aggregate only about 15 percent of the NEES holding company system, could not command and maintain a group of specialists such as the Service Company now has.

They could not justify as high a caliber of men as the NEES holding company can justify; and the men they could justify would have to cover more areas and so be less experienced in any given area.

To illustrate, let us consider a contested rate case. Not only does such a case demand of the regular employees and officers a substantial amount of time which they ought to be spending on regular business, but it also demands the skilled services of accountants, valuation engineers, financial experts, rate engineers, lawyers and others, all of whom must not only be skilled in their own fields but also

conversant with regulatory and judicial procedure and able to handle themselves in the heat of battle. [989] Such men are on the Service Company payroll and available to the gas companies. Any service company or other pool of specialists which the gas companies could justify, if they were independent of the New England Electric System holding company system, would not be able to supply but a fraction of the specialists which the present Service Company now has available. By and large the gas companies would have to retain outside professional firms at substantially greater costs.

Moreover, the gas companies would lose the value of the many informal contacts with the Service Company personnel on problems which can usually be answered by picking up the telephone. For example, a local manager might be asked to contribute to a local hospital or school building fund. If he hasn't had recent experience with such a request, he can call one of the system's lawyers to inquire as to the rights of a utility to make such a contribution and he can call the Vice President for Management as to policy. Another manager might be seeking local licenses for production and storage facilities and need a quick answer on the effect on insurance of adjacent properties. He can call the Service Company insurance department.

Another manager might need information for local assessors as to value of company property and can call the Service Company specialist in this area. Most of the calls [990] of this type take very little time to answer by a specialist who is familiar with the system gas properties and personnel. This type of on-the-spot service would be virtually impossible to duplicate from outside consultants.

In summary, the intangible but real benefits of having a large group of trained specialists available to the gas companies do not show up in the 1958 Service Company billings to system gas companies.

Q. Mr. Krause, have there been any major changes in the Service Company organization since November 1957 when the Service Company was last described in these proceedings? A. Yes. As was brought out in this proceeding back in 1957, the Service Company did not then engage in policy making functions and its officials were not also officials of the holding company nor of the affiliated operating companies. This was in accordance with the policies established in 1941 at the time of the Service Company organization.

In 1959 application was made to the Securities and Exchange Commission for approval of modifications in the organization and conduct of business of New England Power Service Company so as to permit interlocking of officers and directors between the Service Company and New England Electric System and between the Service Company and the operating companies within the New England Electric System holding company system. The application further provided that such [991] officers and employees of the Service Company who had been or were also officers or employees of the holding company would be paid by the Service Company and that such payments and related expenses would then be charged to the companies benefitting from their services by methods of allocation already approved by this Commission. These modifications were requested in accordance with the principle that the cost of management is a recognized part of the cost of utility service and that the operating companies should bear the reasonable costs thereof.

As has already been stated by Mr. Webster, the change of organization and method of operation of the Service Company was to facilitate the elimination of duplicate management personnel within the holding company system and was to permit major streamlining of system management along functional lines. I need not repeat the reasons

which Mr. Webster has already given for the filing of this application, but I might add that it was done in order to promote the efficient and economical operation of the holding company system as a whole.

The proposed modification of the Service Company organization and method of operation was approved by this Commission on December 30, 1959, File No. 37-7. See Holding Company Act Release No. 14128.

Early in January of this year changes in the officers [992] and directors of the Service Company were effected pursuant to the authority granted by said December 30, 1959 order of the Commission. All of the officers of New England Electric System became officers of the Service Company as well as retaining their positions with New England Electric System.

In addition, the top six officers of New England Electric System together with the top engineering and operations men, who at the time was on the payroll of New England Power Company, became the directors of the Service Company. This not only resulted in interlocking positions between the holding company and the Service Company but also between some of the operating companies and the Service Company.

Q. Do Respondent's Exhibits 54, 55 and 56, which were introduced through Mr. Webster, reflect the change in the Service Company officers and their present interlocking with other system companies? A. Yes.

Q. Does this change in the organization of the Service Company affect the organization chart of the Service Company introduced as Exhibit 28 in this proceeding on November 19, 1957? A. Yes.

Q. Will you describe the present situation? A. A functional organization chart for the New England Electric System holding company system has already been presented by Mr. Webster and as a result of the streamlining

[993] of the System organization this constitutes an organizational chart for the Service Company as well as for the entire holding-company system.

If you will refer to Respondent's Exhibit No. 53, the chairman of the board and the president, on the top line, and five of the six vice presidents, on the second line, are officers of the Service Company.

The various departments or functions of the Service Company as well as of the other system companies are shown under each of these vice presidents. As a result of the Service Company being incorporated into the system streamlined organization, no real purpose would be served by presenting an organizational chart for the Service Company alone.

Q. Has the change in the organization and method of operation of the Service Company necessitated modification of the service contracts between the Service Company and the other companies in the same holding company system? A. No. In addition to the services which were expressly spelled out in the contracts, it was contemplated that the companies having contracts with the Service Company, could request such additional services as they desired. Accordingly, early this year all of the operating companies, and New England Electric System itself, have requested the Service Company to perform such additional services as are [994] permitted by the Commission's order of December 30, 1959.

Q. What has been the net result of this change in organization and conduct of business? A. It has facilitated the streamlining of the holding company system organization along functional lines so as to achieve an efficient organization and the elimination of unnecessary duplication in management personnel.

Q. Will this change in organization and conduct of business have an effect on any showing of loss of economies

which would result from the separation of the gas business from the electric business of the system? A. Yes it will. During the test year of 1958 which is being used in this proceeding, the operating companies in the system enjoyed the advice of the top management personnel of New England Electric System without cost. As a result the operating expense figures of the operating companies do not include a normal amount of executive and administrative expense. The proposed staffing of the gas companies, on the assumption they were separated from the electric system, will include full executive and administrative personnel and, accordingly, the operating expenses for such companies will include a normal amount of executive and administrative expenses.

Therefore, a comparison of the pro forma operating expenses to the actual operating expenses shows a greater [995] difference than would be shown if the present companies had been incurring reasonable executive and administrative expense during the test year. I expect the figures with respect to this will be given by another witness. However I would like to add that the figures will not tell the full story. It is obvious that the smaller gas companies, if they are operating on their own, or even some combination of the gas companies operating separately from the New England Electric System holding company system, could not command and retain the caliber of executives which the much larger New England Electric System holding company system can command.

Accordingly, the figures will not reflect the full losses which the gas companies would suffer upon any separation from the New England Electric System holding-company system.

Q. Mr. Krause, you have testified that the New England Power Service Company performs substantial services for the gas companies within the NEES holding-company sys-

tem. If the gas companies were to be separated from the holding-company system, would it have a serious effect on the Service Company or on NEES and its electric companies? A. Your question requires consideration of the overall scope of the business done by the Service Company. During the test year of 1958 billings by New England Power Service [996] Company to other system companies totalled almost \$9,000,000 of which amount only \$317,000, or about 3½ percent was billed to gas companies.

Breaking this down by divisions within the Service Company billings by the servicing division totalled \$2,243,000 of which only \$217,000 or about 10 percent was billed to gas companies; billings by the engineering division totalled \$1,544,000 of which only \$11,000 or less than one percent was billed to gas companies; and billings by the construction division totalled \$5,209,000 of which only \$89,000, or less than two percent was billed to gas companies.

Taking the engineering and construction divisions first, the loss by the engineering division of less than one percent of its business is so small that it will be of de minimis effect; and the loss by the construction division of less than two percent of its business will also be of de minimis effect, especially when it is considered that the construction division can easily be adjusted by the employment and laying-off of labor forces.

Therefore, only the effect of the loss of business on the servicing division need receive any serious consideration. We studied the effect of severance on the servicing division and found that there might be reductions, including reduction in personnel, reflecting a net reduction of payroll and other costs of \$116,000, leaving about \$100,000 (or [997] 46 percent of total billings by the servicing division to the gas companies) to be absorbed by the billings to the electric companies and to NEES. When considered in relation to the size of the electric business of the NEES

system, this amount of \$100,000 is de minimis. (7/100ths of one percent of gross electric revenues or 11/100ths of one percent of electric operating expenses other than depreciation and taxes.) It certainly would not be a reason for concluding the Service Company was no longer economically necessary and appropriate to the operations of the NEES holding company system.

Q. Have you reviewed the Ebaseo report which is Respondent's Exhibit 58 in this proceeding and especially the section relating to the Service Company and the effect on it of the severance of the gas properties? A. I have.

Q. Do you think it sets forth accurately the effect of severance on the Service Company?

Mr. Nowlin: Mr. Examiner, I assume that my objection on the electric company is also continuing with respect to the service company. If it isn't, I will renew it, because it is not an economy or loss of economy to the gas utility company.

Hearing Examiner Ewell: I will take it on the same basis, subject to a motion to strike.

[998] Mr. Dunn: Mr. Examiner, there is also an additional issue involved in this case, and that is the position of the service company in the NEES company holding company system and whether it can be retained as part of the holding company system, so I think this evidence goes to both matters.

Hearing Examiner Ewell: Well, I hope this matter can be pointed up in the morning. While I am sure that I agree that the law should have stability and certitude, at the same time it isn't static. I think everybody agrees to that. I think that the full implications of that should be pointed up in the morning.

Mr. Nowlin: I have difficulty in seeing that the loss of \$150,000 in the service company has anything to do with the qualification of rendering a service to NEES.

Mr. Dunn: Well, is it necessary, Mr. Hearing Officer, to show that the effect of the severance of the gas on the service company itself would not be material so far as the service company is concerned? I think Mr. Nowlin, perhaps, in his question has conceded that point.

Mr. Nowlin: I think it is de minimis, so go ahead. I will hold my objection at the present time.

By Mr. Dunn:

Q. The question was, do you think it sets forth accurately the effect of severance on the Service Company? [999]
A. I do. In fact you will probably notice that the figures which I have just stated for the effect of severance of the gas properties on NEPSCO are the same as those set forth in the Ebaseco report.

This is because this section of the report was developed in the same fashion as the other sections: namely, Ebaseco and the System personnel each started with the same basic figures for the 1958 service company billings; we then conferred with each other as to our respective thoughts as to whether personnel and expense might be eliminated in the Service Company as a result of the loss of the gas business and arrived at judgments with respect thereto.

Q. Were there any special problems in cutting down Service Company personnel? A. The cutting down of Service Company personnel is much more difficult than the cutting down of personnel performing some function such as customer accounting which requires certain manpower for a given number of accounts. Most services by NEPSCO are performed by highly skilled professional and technical people. This applies even in the lower paid areas. For example, in the Corporate Department, the newest girl to have joined the department in 1958 was a file clerk. She has now had two years of specialized training in the running of the Corporate Department files which is very specialized in view of the volume of legal work done by

[1000] the lawyers in that department. She being the only file clerk in the department, it is obvious that upon the dropping of 15 percent of its business, assuming that the gas business of that department is roughly comparable to that of the Gas Division in relation to that of the total System business, it would not be sensible to drop her and leave the department without any file clerk for its electric business.

Accordingly, in determining the way Service Company personnel could be cut down in the event the gas business was lost, we had to consider what personnel and what departments could be cut without affecting the services which would have to be performed for the electric companies. We considered broader reorganizations and shifting of work loads, but found such would not be feasible or economical.

Q. It does not appear in the Ebasco report that any system executive personnel on the NEPSCO payroll were to be eliminated in the event of separation of the gas business? A. That is right.

Q. What is the reason for this? A. First of all, in 1958 the Service Company did not perform any executive and administrative functions for the NEES system companies. As I have already testified such was not done until the beginning of this year. Accordingly, in the test year only such executives were on the Service Company payroll as were necessary for the running of that organization.

[1001] In eliminating the gas business, if the gas companies were to be separated from the NEES system, the volume of the Service Company work would not be sufficiently decreased so as to justify any change in its executive personnel. But assuming that the 1960 changes in the Service Company organization had been in effect during 1958 and that the Service Company in that period had been performing executive and administrative functions for the

System companies, I am of the opinion that there could not have been any cutting down of the personnel therefor upon any severance of the gas business. My reasoning in this respect is that the executive and administrative personnel function for the System as a whole, without specialization in either the gas or the electric business, and that the loss of the gas business would mean only that roughly speaking each one would have about 15 percent of his time freed. In fact, I believe the percentage would be less because many of the executive and administrative gas functions are handled by the Gas Division headquarters in Malden.

Accordingly, in my opinion, cutting down of the executive and administrative personnel would not be feasible and the electric companies would have to bear the costs for which which previously had been billed to the gas companies.

Q. Mr. Krause, I will not ask you to discuss the computation of the dollar effect of these executive and administrative [1002] services inasmuch as I intend to explore this with a treasury witness. Let us turn now to whether or not in your opinion the gas companies would be generally weakened as a result of the severance of the gas business? A. In my opinion they would be seriously weakened. Though as set forth in the Ebasco report each independent gas company has been given an adequate pro forma staff to perform the routine operations of the gas business, the executive and administrative staff has been set up on a pro forma basis with an eye to the amount which each gas company could afford to pay as well as with an eye to what is necessary in order for the company to run.

In general, in my opinion this has required considerable sacrifice in the amounts that should be paid in order to obtain the caliber of men in the executive and administrative area which the gas companies now have available to

them as a part of the NEES system. The smaller the gas company the more of a shoestring operation it becomes.

Q. Mr. Krause, would there by a weakening of the system in the electric area, upon the separation of the gas business? A. Yes, but not to the degree that it would be experienced in the gas division of the system. The increase in operating expenses which the electric companies would incur is shown by the Ebasco reports. In addition there would be various intangible benefits which the electric system would [1003] lose. For example, it would lose the benefit of the sharing of experiences in the area of community relations. This would be particularly noticeable in the smaller municipalities of the system.

In the executive and administrative staffing there would be no immediate reduction or change of personnel at the higher levels but over the years probably the caliber of men that could be attracted and justified would be somewhat less than as if the gas properties remain a part of the system. The loss of intangible benefits to the electric system are harder to put your finger on than in the case of the gas system but I am confident that there would be some over the years.

Q. Mr. Krause, in your opinion as a system executive in charge of retail management, are the gas utility companies of the system so located and related that substantial economies are effectuated by being operated as a single coordinated system? A. I am of such opinion.

Q. Are you further of the opinion that the operations of the gas utility companies are confined to a single area or region within Massachusetts, which is not so large as to impair (considering the state of the art and the area of the region affected) the advantages of localized management, efficient operation and the effectiveness of regulations? [1004] A. I am.

Mr. Nowlin: I am going to object to that. I doubt that

this witness is qualified to express an opinion on a definition of an integrated system as it appears in the statute, despite the fact that he was a very capable and well liked employee for several years.

Hearing Examiner Ewell: He is a lawyer, isn't he?

Mr. Nowlin: He isn't qualified as a lawyer here. He is qualified as a management expert.

Hearing Examiner Ewell: But he is a lawyer.

Mr. Nowlin: I don't know.

Hearing Examiner Ewell: You are an attorney? You have practiced law for a number of years?

The Witness: Yes.

Mr. Nowlin: How long has it been since you practiced law?

Mr. Dunn: I am asking this question of him as a management expert and not as a lawyer. It seems to me he is qualified to have opinions within this area.

Hearing Examiner Ewell: He is an expert. I think he is entitled to have an opinion in this area.

Mr. Nowlin: I will object.

Hearing Examiner Ewell: I will allow it. I think he has already answered the question.

By Mr. Dunn:

[1005] Q. Are you further of the opinion that the gas companies of the NEES system cannot be operated as a system independent of the electric utility system of the NEES system without the loss of substantial economies which may be secured by retention of control by NEES?

Mr. Nowlin: Objection, Mr. Examiner. This is going far beyond the qualifications, at least the asserted qualifications of the witness.

Hearing Examiner Ewell: He is an expert in the field. I think I will have to allow him to express his opinion. He is an expert in the field. He has been in it for years.

The Witness: I am.

By Mr. Dunn:

Q. Finally, are you also of opinion that the continued combination of the electric system and the gas system of the present NEES system under the control of NEES is not so large (considering the state of the art and the area of the region affected) as to impair the advantages of localized management, efficient operation or the effectiveness of regulation?

Mr. Nowlin: I object.

Mr. Dunn: I might say, Mr. Nowlin, that these are questions of fact and not legal argument.

Mr. Nowlin: They are conclusions, expressions of [1006] legal conclusions, expressions of facts and conclusions.

The Witness: May I answer the last question?

I am.

Mr. Dunn: This completes my examination of Mr. Krause at this time.

Mr. Nowlin: Off the record.

(Discussion held off the record.)

Mr. Dunn: Mr. Examiner, Mr. Quarles would like to say something as to starting time tomorrow morning, if he may.

Mr. Quarles: I am a little embarrassed to suggest it, in view of the fact that there is so much work to be done, memoranda, and things of that kind, but in view of the witnesses that we have here that we hope to be able to put on tomorrow, I was going to suggest that we start at 9:30.

Mr. Nowlin: Off the record.

(Discussion held off the record.)

Hearing Examiner Ewell: Let's make it 9:45 o'clock. We will accordingly adjourn until 9:45 o'clock tomorrow morning.

(Whereupon, at 5:10 o'clock p.m., the hearing was adjourned until Friday, May 20, 1960, at 9:45 o'clock a.m.)

[1008]

PROCEEDINGS

Hearing Examiner Ewell: We have a quorum, we can get started.

Mr. Dunn: Thank you. The first witness this morning is Mr. Hanson. He has already been sworn in this case.

Whereupon,

HARRY HANSON

was called as a witness, and, having been previously duly sworn, was examined and testified as follows:

Direct Examination

By Mr. Dunn:

Q. Do you still hold the same positions in the NEES System as you held when you testified in this proceeding in 1957? A. Since 1957 I have continued as the chief financial and accounting officer of the System but there have been some changes in the specific positions held by me and my immediate assistants. I am now vice president and treasurer of New England Electric System; vice-president, treasurer and director of New England Power Service Company and treasurer of all the Massachusetts electric subsidiaries and gas subsidiaries other than Lynn Electric Company and Lynn Gas Company.

Q. Will you please state as briefly as possible your responsibilities and sphere of activities? A. As principal financial and accounting office of the [1009] NEES System, I have responsibility for all financial, accounting, tax and insurance matters. These activities include security issues and borrowings, security acquisitions and transfers, cash transactions of all kinds, Federal and State tax matters, insurance matters, all phases of accounting from meter reading to customers' bills and general accounting, preparation of periodic reports to management, security holders, regulatory commissions, and the like.

Mr. Albert E. Westwood, my assistant, is Assistant Treasurer and Assistant Secretary of NEES and also Assistant Treasurer of the Massachusetts companies. As shown by Exhibit No. 53, there are several groups of personnel within the New England Power Service Company which report to me. They perform various functions for NEES and system companies in connection with tax matters, corporate financing reports and statistics, insurance matters, plant and depreciation accounting and auditing and systems work.

Q. Would you describe the groups in the Service Company which report to you? Let us start with the tax group?
A. This group includes a Vice President of the Service Company and six others. They are engaged in the preparation and the filing of all Federal and State tax returns, including the Federal consolidated tax return, in the preparation for an attendance at hearings on tax cases before the Internal Revenue Service and other taxing authorities, in conferences [1010] with revenue agents in connection with the examination of tax returns, and in studies of the taxable effect of mergers, sales of assets and property relocations, and in similar matters. The use of this specialized group is of particular value to the individual system companies because, as we all know, the determination of taxes for a group of companies such as ours requires specialized knowledge.

Q. Will you now describe the activities of the corporate finance and reports and statistics groups of the service company?
A. The so-called corporate finance and report and statistics groups are divided into three sections, whose functions are closely related to one another. The corporate finance section of this group includes a Supervisor and six others who specialize in the preparation of registration statements, applications and declarations, and reports to security holders, institutions and others, together with

similar services. Another section includes a Supervisor, who is assisted by a total of eleven accounting and clerical personnel. The work in this section is quite varied and includes studies of income, cash and construction estimates, preparation of financing programs, preparation of data to satisfy indenture covenants, studies regarding rates of return and similar matters. Others specialize in compiling operating and other statistics, and in compiling and reviewing reports to State [1011] and Federal regulatory authorities, while others are concerned with keeping the books of account of NEES and preparing corporate and consolidated financial statements. The third section of this group includes four persons who provide transfer and dividend paying services for companies with minority stockholders, prepare and issue short-term notes payable to banks and to NEES, prepare reports on bank deposits and notes payable, issue Series E Savings Bonds under a payroll deduction plan, arrange advances to employees and make petty cash disbursements and perform similar services.

Q. Would you now describe the activities of the insurance group of the Service Company? A. The insurance group consists of an Insurance Manager and eight others. Its activities include anticipating and meeting the insurance needs of all the companies, securing competitive quotations, placing contracts, adjusting losses, administering group insurance and annuity plans, advising on social security laws and regulations, and making appearances before industrial accident boards and others when required. For the System companies, both gas and electric, we have all the usual forms of insurance carried by utilities and they are packaged in schedule or blanket form so as to obtain the maximum protection at minimum cost. Just to name the more important coverages, we carry fire, windstorm, explosion, workmen's compensation, public and property damage liability and [1012] automobile liability. In addition, em-

ployee fringe benefits include annuities, group life, health and accident insurance, and Blue Cross and Blue Shield plans which provide hospitalization and surgical protection. The premiums paid by our companies total about seven million dollars a year.

Q. What about plant and depreciation accounting?

A. This group of the Service Company consists of a vice-president, who, together with his staff, specializes in plant accounting and depreciation matters to satisfy regulatory and other requirements. They advise and assist local accounting people on plant accounting and depreciation matters and participate in the examination of property and records by Commission personnel. In addition, the head of this group assists me on other matters including analysis work when rate changes are proposed.

Q. What other functions come under your jurisdiction?

A. Two additional groups in the Service Company, the Internal Audit group and the Systems and Methods group, are also under my jurisdiction, as are all retail Treasury and Accounting Organization personnel. These functions report directly to my assistant, Mr. Elmer H. Lother, who is Vice-President and Comptroller of New England Power Service Company. I understand that Mr. Lother will describe these groups in detail later, so I will mention their activities only briefly. The Systems and Methods group makes studies in connection with [1013] the accounting procedures of subsidiary companies and also reviews accounting forms and reports, with a view to standardizing and simplifying the accounting procedures. Another major assignment of this group is to keep informed in the machine and equipment field so they can make recommendations to us as to the best type to do the different jobs as of course automation is very important. The Internal Audit group makes annual audits of the companies and otherwise provides for necessary internal controls.

Q. What about the Retail Treasury and Accounting Organizations? A. The Retail Treasury and Accounting Organization is divided into seven general districts, each under the supervision of a Treasurer or an Assistant Treasurer. An Assistant Treasurer at Worcester administers local treasury and accounting activities for Worcester County Electric Company, Northampton Electric Lighting Company, Northern Berkshire Electric Company, Southern Berkshire Power & Electric Company, Central Massachusetts Gas Company, Northampton Gas Light Company and Wachusett Gas Company. An assistant treasurer at Malden administers local treasury and accounting activities for Mystic Valley Gas Company and Suburban Electric Company. Another Assistant Treasurer located at Lawrence Administers local treasury and accounting activities for Merrimack-Essex Electric Company, Lawrence Gas Company and North Shore Gas Company. An Assistant [1014] Treasurer in Quiney supervises local treasury and accounting activities for Quiney Electric Company, Weymouth Light and Power Company and Norwood Gas Company. A Treasurer at Lynn administers local treasury and accounting activities for Lynn Gas Company and Lynn Electric Company. This situation at Lynn is a temporary one as we are planning on mergers in due time. In addition, there is a Treasurer located in Providence, Rhode Island, who administers treasury and accounting activities for the Narragansett Electric Company, the Mystic Power Company in Connecticut, and as Assistant Treasurer the treasury and accounting for Attleboro Electric Company in Massachusetts. Another Treasurer located at Lebanon, New Hampshire, administers local treasury and accounting activities for Granite State Electric Company. The last two Treasurers are not concerned with any gas operations as we disposed of our Rhode Island and Connecticut gas properties in 1959.

Q. What do the local Treasurers and Assistant Treasurers do? A. The Treasurers and Assistant Treasurers of these companies administer all of the local treasury and accounting activities for these companies. As a general rule the books of account and other basic accounting records are maintained at the principal office of each of the companies, while billing and other customer contact functions are generally performed in company offices with collection agencies located in each [1015] sizable municipality served.

The day-to-day accounting activities of the operating companies are under the direct supervision of the administrative personnel located in the field. There is, of course, a close working arrangement between Boston office personnel and these local treasury and accounting groups. I can best summarize this by saying that the work done in the local offices under the supervision of the local Treasurers and Assistant Treasurers is work involving customer accounting, general accounting, payrolls, plant accounting and stores, while treasury and accounting activities involving temporary and permanent financing, relationships with security owners and dealers, special accounting problems and studies, systems work and auditing, tax and insurance matters, and similar items are handled by personnel with headquarters in Boston.

Q. Does that cover all of the Treasury and Accounting Organization? A. No, it does not. We also have two groups that maintain all of the accounting records, do the payroll and billing work and the like for both the New England Power Service Company and New England Power Company. Each group is supervised by an Assistant Treasurer who reports to me.

Q. Mr. Hanson, will you now describe to us the particular areas where, as you see it, joint gas and electric activities are performed? [1016] A. Starting with the central organization in Boston, all of the executive and administrative

group are engaged from time to time in performing functions for both gas and electric companies. In addition, most of the specialized groups in the New England Power Service Company are also engaged in performing functions for both gas and electric companies. This is particularly true of the Servicing Division. In the Engineering and Construction Divisions there are relatively few gas activities performed. Going to the Gas Division in Malden, the personnel of the Gas Division are engaged in joint activities only between gas companies. At the local offices in the common retail areas, while there are other people engaged in performing joint functions, they are for the most part engaged in treasury and accounting activities. Other areas involved are customer service, garage, and similar activities. By and large, however, when measured by the number of people involved in performing joint activities on a day-to-day basis, the joint functions at the local offices are principally within the treasury and accounting organization.

Q. Will you please discuss now some of the principal benefits derived by the gas companies from being part of the System, as you see it? A. Such benefits are many and varied. Of particular importance is the area of joint utilization of personnel and equipment. With respect to New England Power Service Company [1017] personnel this means that specialists are available from the day-to-day problems of these gas companies as well as the electric companies. No doubt many functions are now performed, because of specialized knowledge, in a fraction of the time that it would take people to perform a similar function for these companies on an independent basis. Similarly, the Gas Division organization, because it can draw on the executives in the central organization at Boston, provides management services to the gas companies at minimum costs. When we get to the local operations, or the day-to-day operations of running a gas or electric utility, we get

substantial benefits by being able to use personnel jointly for these operations. The combination receiving and dispatching of service calls, the execution of combination service calls, the reading of meters of combination customers, joint customer bookkeeping, the maintenance of joint cashiering functions and joint credit and collection activities, are but some of the more obvious benefits derived by both the gas companies and electric companies from combination operation of treasury and accounting functions.

Q. Do the gas companies enjoy Federal income tax benefits by reason of being part of the NEES system? A. All of our companies participate in a consolidated Federal income tax return and the operating subsidiaries obtain substantial tax advantages, the most important of which [1018] results from the deduction of interest and other expense of NEES. The net result is that the Federal income taxes of our operating subsidiaries are about 10 per cent less than what they otherwise would be. The actual effect of severance of the gas properties would result in the transfer of aggregate tax savings of from \$150,000 to \$200,000 a year from the gas companies to the remaining electric companies.

Mr. Nowlin: I am going to move to strike the last answer as being irrelevant. The Commission has held that the loss of tax benefits is not a loss of economy.

Mr. Dunn: Mr. Examiner, the previous cases as I have found them go to the weight of the testimony. They have not excluded the testimony on Consolidated tax savings. I urge that the evidence be allowed.

Hearing Examiner Ewell: Will you read the question and answer?

(Question and answer read by reporter)

Hearing Examiner Ewell: As I said yesterday, the law is not static and the Commission might want to look at it again.

Mr. Nowlin: They took a look at it in three cases and turned it down in all three cases.

Hearing Examiner Ewell: I think the objection comes to the weight. I am going to let it stand. Overruled.

Mr. Nowlin: Exception.

[1019] Mr. Dunn: Do I understand the evidence is allowed in the record?

Hearing Examiner Ewell: It is.

Mr. Dunn: Thank you.

By Mr. Dunn:

Q. What are other important benefits to the gas companies as part of the NEES system? A. The advantages to the subsidiaries of NEES through their relationship with the total treasury and accounting organization are many and varied. Because of the broad experience and varied contacts of Boston office personnel, many advantages and economies are obtained by subsidiaries. Through contacts with the financial world, and this includes banks, investors and investment firms, it has been possible to finance the construction programs of each of the subsidiaries on a basis which provides each company with a sound capital structure. The financial knowledge of NEES and NEPSCO personnel has also proven of substantial importance in formulation of plans, and the carrying out of such plans, for the consolidations and mergers of companies, thereby simplifying financing problems and obtaining savings through eliminating companies and combining operations. This is illustrated by the fact that in 1935 when NEES registered under the Holding Company Act there were 31 active electric subsidiaries, 11 active gas subsidiaries and 14 active combination electric and gas subsidiaries, a total [1020] of 56 active operating companies, while at the present time our active electric subsidiaries number 14 and our active gas subsidiaries number 8, a total of 22. Further progress in this direction is anticipated in the future.

Q. Did you hear Mr. Webster's testimony as to the retention of Ebasco Services Incorporated to study and report on the effect of severance of the NEES gas companies from the NEES system, and also his testimony as to the scope of the study and the assumptions on which it was to be made? A. I did.

Q. And did you hear both Mr. Webster's testimony and Mr. Dalbeck's testimony as to the participation of the NEES system in the making of the Ebasco study? A. I did.

Q. Do you have anything to add? A. No, I don't. I was in agreement with the need for obtaining the independent judgments and opinions of an outside firm of recognized standing and I participated in the selection of Ebasco for the job. Also, I participated in the determination of the scope of the study to be made by Ebasco and in the assumption to be used, and I concurred therein. As to the participation of the NEES System in the making of the Ebasco study, I agreed that personnel of the NEES System and of Ebasco should cooperate but that each should be in a position to support independently their own judgments.

Q. Would you, as the chief financial and accounting officer of the NEES system state in general terms the participation [1021] of the treasury and accounting personnel in the making of the Ebasco study. A. Since one of the principal areas which would be affected by separation of the gas properties from the NEES system would be the treasury and accounting activities and since the effect of separation on other divisions of the organization would be reflected in increased pro forma operating expenses, it was obvious that the treasury and accounting personnel would have a major role to play in the study of the effect of severance. In order to avoid unnecessary duplication of expense in having Ebasco come into our various offices and dig out all the mass of material that was necessary to start with,

when the material was readily available in our own records and in our reports, my department undertook the job of collecting the requested material and making it available to all concerned.

Q. Was the collecting and dissemination of information the extent of the work required of your department in connection with the ascertainment of the effect of severance?

A. By no means. I was also aware that my department would have a second big area of responsibility, namely, the analyzing of the effect of severance on the treasury and accounting organization and the making of judgments as to the pro forma treasury and accounting organizations for the independent gas companies and for the system electric companies. I also realized that there would be substantial effect from the [1022] severance upon other areas of my responsibility such as insurance and taxes and that such would require careful analysis on our part. And finally, there was the task of reviewing the judgments of Ebasco as set forth in their report and of analyzing them along with our own conclusions.

Q. Would you tell us of the assignment of personnel in your treasury and accounting area.

A. Initial assignments of personnel were made with a view to collecting and supplying to both Ebasco and ourselves the necessary basic material. Not only did we develop the material which we felt was necessary for appropriate evaluation of this situation but also we supplied such additional material as Ebasco requested of us. As the basic material became available, it was then necessary to develop the pro forma organizations for the staffing of the independent gas companies and the electric companies upon severance of the gas companies. At that time, additional personnel were assigned to participate in conferences with Ebasco as to the necessary staffing—particularly in the treasury and accounting

areas. Then followed a period of evaluation of the material on existing organizations and of the pro forma organizations and, as it became apparent that further areas of investigation were necessary, additional personnel specializing in particular areas were assigned to the tasks. By this spring a substantial number of people, particularly in the higher echelons of our treasury and accounting [1023] organization, were devoting all or a considerable portion of their time to the studies of the effect of severance.

Q. What has been your personal participation in the severance studies? A. First, as I have already indicated, I participated in deciding the scope of the studies. Then came the initial assignment of personnel and the making sure that the studies got under way in an efficient manner. As the material has flowed in I have conferred with my principal assistants as to the content of the material and as to the staffing of the pro forma organizations—in the treasury and accounting areas on a board policy basis I participated in the making of our own judgments as to the effect of severance. Finally, all the way through it has been my responsibility to see that adequate personnel from the treasury and accounting organization were assigned to do the job, but without interference with the necessary functions of operating our system on a day-to-day basis.

Q. Mr. Hanson, let us consider a couple of areas with which you have particular concern. Would the adjustment of taxes be such an area? A. Yes, the tax personnel in our system report directly to me.

Q. Are these adjustments properly shown in the Ebasco report? [1024] A. In my opinion the tax adjustments as reflected in the Ebasco report are accurately shown.

Q. Mr. Hanson, while we are on the subject of taxes, would you tell us more about the tax adjustments and the effect of severance upon the allocation of the consolidated tax savings which the NEES gas subsidiaries now realize.

Mr. Nowlin: Objection, Mr. Examiner.

Hearing Examiner Ewell: That is the same question?

Mr. Dunn: It is.

Hearing Examiner Ewell: And the same objection?

How much testimony along this line do you have?

Mr. Dunn: There is not going to be very much, sir.

Mr. Nowlin: Anyway, it is too much.

Hearing Officer Ewell: What case did you cite on that point? You said the Philadelphia case, and how old is it?

Mr. Nowlin: It is a case decided June 1, 1948.

Hearing Examiner Ewell: 12 years ago?

Mr. Nowlin: And Cities Service case was decided in 1944 and there is another prior. I think it is the Atlantic Traction Company which was decided about that time. We have had two or three different commissions who have set on the cases.

Hearing Examiner Ewell: It has been uniformly held that the tax saving is irrelevant?

[1025] Mr. Nowlin: The Commission disregarded it so there is no need of putting it in there if the Commission is not going to consider it.

Mr. Dunn: They have not held it irrelevant. It is a matter of weight to be given to the evidence.

Mr. Nowlin: They have been given no weight.

Mr. Dunn: You did raise an interesting point that the cases were decided in 1944 and 1948. We have now had another 10 to 15 years of experience with consolidated tax savings. It has become a fact of life and the regulatory commissions in setting rates have now taken this into consideration in determining the amount of taxes that will be allowed in the rate structure. They take the actual taxes paid, that is, the lower taxes resulted from a consolidated tax savings. They do not allow you to get a return to cover the hypothetical taxes that you would have if you were on a separate return basis.

Hearing Examiner Ewell: Well, I certainly do not want to make a ruling contrary to any definitive ruling of the commission.

Mr. Nowlin: May I read this quote?

"With respect to the inclusion of these claimed losses of 'the saving resulting from the use of a consolidated tax return by Philadelphia Company and its subsidiaries', it may be noted that we have on previous occasions considered and rejected the argument that tax savings constitute 'substantial [1026] economies' within the meaning of Clause A. We have pointed out that such savings bear no relationship to any operational functions of retention and control, that the argument assumes a continuation of current tax laws which may be changed, and that furthermore we cannot permit the incident of tax savings to disrupt the basic policy of the Act that holding companies generally will be limited to a single integrated system." And they also cite Cities Service, 15 SEC 962, 1944, and Federal Light and Traction Company, 15 SEC 675, 1944.

Mr. Dunn: I would like to suggest that in reading that quotation he should have continued and read the next sentence. It continues, "It should be noted that, while respondents have attempted to claim this tax item as an additional loss their aggregate figures do not take into account the very much more substantial tax reduction which would result from their estimated increased expense."

Now the pertinence of that sentence is that as a result of the increased expenses that will stem from the severance of the gas properties you do have a reduction in your taxes and the Commission has said to have it consolidated, that is, to have a consolidated tax saving be of any weight you should offset it with these reduced taxes from increased operating expenses. We have done that in our studies and I understand it is so reflected in the Ebasco reports. We feel that the tax picture has been adequately presented and

that taking both [1027] phases of it together it is relevant and material to this case.

Mr. Nowlin: To further illustrate it presume these eight companies were under a holding company they could all file consolidated tax returns.

Mr. Quarles: Mr. Examiner, there are a number of areas in which apparently we and the staff are in disagreement as to what may and what may not be taken into account.

The taxes are one. The savings to the principal system is another and there may be others. Our position here in this hearing is to undertake to make a record that will enable the Commission to give fair consideration to the contentions on both sides of these questions.

Certainly, the tax situation today is not covered by precedent, by the rulings of 12 or 15 years ago. We wish to be in a position to present this argument to the Commission and we would hope to prevail. If we do prevail then the record is complete and the decision can be made. If we do not prevail on any one of these, no particular harm whatever has been done by letting the evidence in.

In the cases that have been referred to yesterday and today not one of the Commission's cases excluded the evidence. In each case they have taken it under consideration, have decided whether it should be given a little weight, no weight, or considerable weight, but not one of them is a precedent for excluding the evidence from the hearing before [1028] the Hearing Officer.

The cases in which the SEC has said "Loss of economies to a principal system is not pertinent or should be given little weight", in each of the cases, they took the subject up and considered how much weight should be given, but they did not say the evidence should have been excluded. The SEC has been reversed on this question of what types

of losses should be taken into account and since that reversal, has not had an opportunity to reconsider it. We want to raise that issue for consideration.

Hearing Examiner Ewell: In which cases were they reversed?

Mr. Quarles: Louisiana Public Service Commission v. SEC, 235 F. 2d, 167. That case went to the Supreme Court on an entirely different issue so the decision of that court stands. In that particular case it stands. Our purpose here is to bring in to the record the facts that are relevant to each of these issues so that the Commission can consider the case in its entire context and can rule on these issues as a substantive matter and not as an abstract procedural matter.

Hearing Examiner Ewell: Do you have that case available?

Mr. Quarles: I do not have the reporter. I imagine it is here in the building.

Hearing Examiner Ewell: I would like to read it before [1029] I rule on this. The thing that bothers me, I certainly do not want to allow evidence in—I am inclined to let it in, as I said before, on the ground that it seems to me it goes to the weight, the objection goes principally to the weight, and having in mind that the Administrative Procedure Act states that any probative evidence may be received in these proceedings and the further ground that I think the Commission might want to take a second look at some of these problems. I would be inclined to let it in, but I do not want to open up something that is going to involve a lot of exhaustive cross-examination in an area that might greatly extend this record. So, I want time to consider it and I would like to see these cases that you mentioned before I make a definite ruling on it.

Mr. Quarles: Of course. We do not yet know what the position of the staff may be with regard to some of the

things that we are claiming as losses to be taken into account, but so far as we can see if you add all of these controversial issues together they are a very small part of this case, and if everyone of them should ultimately be resolved against us we still maintain we can show clearly and conclusively sufficient losses of economies to come within the statutory requirement, but we feel we are entitled to have the record sufficiently complete to permit an argument, not just of any matter on which the law is clearly established. We are not undertaking [1030] to make new law which reverses decisions. We think in this particular case that we are following the law, that the Commission itself will follow in regard to taking into account the losses to the principal system. We think that in the ease of taxes where we have gotten to the point that the tax effect on the operating companies is one of the factors in determining the rate that will be allowed, how it will affect the ultimate consumers, we think that is something that the SEC will want to take a look at.

Hearing Examiner Ewell: It is a fact taken into consideration on the rates?

Mr. Quarles: Yes, sir. It is my understanding and counsel for the Massachusetts Department of Public Utility is here.

Mr. Murry: That is correct. It is.

Mr. Quarles: We think it is important and the Commission is entitled to have the whole story before it even if in the end it decides that you should not give it very much weight. We expect they will decide that it should be given full weight so we would urge on you in any of these doubtful matters to resolve the doubts in favor of letting the evidence in so it is there rather than running the risk of later having a reversal which would invalidate this procedure and going through the whole thing again.

Hearing Examiner Ewell: I want to be sure there is [1031] a reasonable doubt.

Mr. Quarles: There is more than a reasonable doubt, sir, and we will get the case.

Hearing Officer Ewell: Can you go on with something else and pass this for the time being and have a recess and take it up after the recess?

Mr. Nowlin: Mr. Examiner, I would like to state that I have a copy here of the staff's brief that was filed in the Court of Appeals for the Fifth Circuit in the case which Mr. Quarles referred to, the Louisiana Case. I notice the following comment, the Philadelphia Case is cited in support of this proposition and there is a footnote, "Although Petitioner in this case argued that the loss of economies must be measured by its effect upon the principal and additional systems, the Court of Appeals apparently deemed this not worthy of consideration since the discussion was solely in terms of loss of economies to the gas system." So, apparently the issue was involved in the Philadelphia Case, but the court did not think it warranted enough attention to make any special discussion of it.

Hearing Examiner Ewell: May I see that case, please?

Mr. Nowlin: Yes, sir.

Mr. Quarles: I might respectfully suggest that the decisions of the court are entitled to a little more consideration than the statements of the SEC staff in their briefs.

[1032] Hearing Examiner Ewell: The Commission has not passed on this question since the Circuit Court case has it?

Mr. Nowlin: Not that I know of.

Mr. Quarles: Not that we know of.

Hearing Examiner Ewell: All right, let's proceed. Can you just pass this particular subject for the time being and go back into something else until the recess.

Mr. Dunn: Yes.

By Mr. Dunn:

Q. Mr. Hanson, does the Insurance Department report directly to you? A. Yes.

Q. Would insurance costs be affected by severance of the gas companies from the NEES System? A. Yes. It early became apparent that the gas companies upon becoming independent would have to bear substantial increased insurance costs. This being so, I immediately directed our insurance experts to make a thorough and careful analysis of the situation.

Q. Would you tell us something about this? A. Our insurance personnel analyzed our own records and conferred with several insurance brokers, agents, and insurance companies with whom we deal. Some of these investigations were made by company personnel alone, and some of them were made [1033] by company personnel alone, and some of them were made with Ebasco consultants. After our consultations were arrived at our our own insurance personnel reviewed the conclusions with me.

Q. In your opinion, Mr. Hanson, do the increases shown in the Ebaseo Report fully reflect the effect of gas severance and indicate the increased costs which the independent gas companies would have to pay? A. They substantially reflect our own conclusions. However, I feel that they do not reflect the whole situation. A good example of this is the amount of insurance coverage. The 1958 insurance premium cost to the gas companies for the coverages where we would expect increases in costs under independent operations aggregated about \$140,000, which would increase if these companies were separately owned and operated to about \$420,000, an annual increase of \$280,000. This, however, doesn't tell the complete story because the increased costs were based upon less favorable amounts of insurance. I think it quite possible that a small and independently operated gas company would have difficulty buying similar

broad form insurance as under the NEES program because of the reduction in spread of risk and premiums. With reduced limits of insurance a bad accident might put a company into bankruptcy, and perhaps more importantly, there would be a lack of money to settle any judgments against the company. When risks can be [1034] spread and coverages combined it gives a greater volume of insurance and premiums resulting in definite advantages.

Q. Mr. Hanson, in your evaluation of the Ebasco report do you consider that the pro forma organizations set forth therein reflect an overstaffing or an understaffing or something in between? A. In my opinion the organizations set forth therein are minimum organizations. Though we have assumed that good service by these gas companies is to be continued if they became independent, we have also realized that they could not afford personnel adequate to carry on all the specialized functions which are now performed upon request by the Service Company and other system personnel on a cost basis. In my opinion the staffing has been on a conservative side. This is particularly true in the executive and administrative area. In the operating areas you can't cut an organization below certain levels physically necessary to do the work. For example, a meter reader can cover only so many meters a day. But in the administration you can make some cuts which have their effect principally in the quality of service provided over a long period of time.

Q. What of the salary and wage levels set forth in the Ebasco report for the pro forma organizations? A. Again I differentiate between executive and administrative personnel and operating personnel. For the latter, [1035] wage levels are pretty well established and there is little judgment to be exercised. In my opinion the Ebasco report reflects such wage levels. For executive and administrative personnel, the salary scales are more a matter of judgment

—particularly in the higher echelons. As the top treasury and financial officer of the NEES system I have knowledge not only of our own salary scales but also of those of comparable utilities—particularly in the New England area. I believe the pro forma salary scales set forth in the Ebasco report are conservative. They reflect the size of the company involved as well as the responsibilities of the respective positions. They are stated on the basis of a concern which has been in operation with higher salaries for senior men and lower salaries for younger men in training. They are not set up on the basis of what it would cost to lure and obtain a completely new staff of able and experienced men from existing positions in outside concerns.

Q. How about the other pro forma costs set forth in the Ebasco studies? A. Again I am of the opinion that they are minimum costs. Only the essentials have been provided for. For example, in the treasury and accounting areas I believe only the essential space and equipment requirements have been provided.

Q. Are you in general agreement with the conclusions [1036] that are set forth in the Ebasco Report and with the dollar effects shown therein on the income statements of the gas companies and the electric companies of the NEES System upon the separation of the gas companies from the NEES System? A. I am.

Q. Mr. Hanson, do the Ebasco reports reflect all of the losses which the gas companies would suffer upon separation? A. By no means. The Ebasco report gives the dollar effect of severance on the income statements. However, they do not reflect such matters as losses of intangible benefits or losses which would be chargeable to plant accounts rather than operating expenses. Though the annual losses which would be chargeable to plant are probably not important in comparison to the substantial losses which

would be charged to operating expenses, the losses of intangible benefits would be serious.

Q. Would you give an example of an intangible benefit which would be lost to the gas companies upon severance from the NEES System? A. Yes. Financing is one of my particular responsibilities. The NEES System as it now exists requires thirty to fifty million dollars a year to finance its construction. This means we are constantly raising funds and have frequent issues of common and preferred stocks, bonds, and long and short-term notes. We are known in financial circles and I'm confident that [1037] the credit of NEES has enabled the gas companies to finance their needs at a lower cost than they could have done on their own. We are thoroughly familiar with the many and intricate requirements of regulatory agencies, stock exchanges and investors and can efficiently handle them on a cost basis for all of our companies.

Q. Would you tell of the financing of the NEES gas companies in recent years? A. The financing of our gas subsidiaries in the past ten years has not been an easy task. My mind goes back to 1952 during the conversion of our gas subsidiaries from low btu gas when it was necessary to adjust all consumers' appliances and equipment. The earnings of our gas subsidiaries had been very low indeed for several prior years so they didn't present a pretty picture for outsiders to invest in. The conversion costs of our subsidiaries totaled about \$5,000,000 and the Massachusetts Department of Public Utilities authorized amortization of this cost through charges to expense over a ten-year period. We therefore were after conversion loans which would also be paid over a ten-year period to phase in with the accounting.

I approached a number of banks and insurance companies but only four had any interest whatever, those being the John Hancock Mutual Life Insurance Company, Travelers

Insurance Company, Chase National Bank of New York and the National City [1038] Bank of New York. I doubt whether we could have got four interested groups if it hadn't been for the gas companies' affiliations with NEES. I might add the shopping around took several weeks and culminated in our obtaining conversion loans from the National City Bank of New York with an interest rate on the first two installments of 3-1/4 per cent, the next three at 3-1/2 per cent and the last five at 3-3/4 per cent, or an average cost of 3-2/3 per cent, which is certainly quite different than could be obtained under present money conditions or could have then been obtained if the gas companies had not been part of the NEES system. I also recall the difficulties at first on short-term bank borrowings for the gas companies and it was necessary for some time to pay more than the prime rate. But we kept whittling at this so that for several years now the gas companies have enjoyed the prime rate on their short-term borrowings. The bond financing by our gas companies was also time-consuming and required the services of people who knew just what to do as many conferences with rating agencies, insurance companies, prospective underwriters, and the like, were necessary.

I recall that in 1950 one of our then-gas subsidiaries, named Salem Gas Light Company, had built up its short-term debt and after many talks we were able to sell \$1,000,000 worth of 3-1/2 per cent twenty-year bonds to the John Hancock Life Insurance Company of Boston. This wasn't too long after Salem [1039] Gas Light Company had abandoned coal gas operations and changed over to water gas and the outlook was certainly not encouraging as a considerable amount of investment in coal gas plant and equipment had to be written off against surplus over a period of years. Without going into more details, several bond issues aggregating 14.5 million dollars have been

issued by our gas subsidiaries in the period since 1951 and they all presented problems of one kind or another. It is my firm conviction that, if it hadn't been for the equity interest by NEES in these gas companies and having qualified personnel to do the jobs that were necessary, the financing and accounting problems would not have been solved in so satisfactory a manner.

Q. Are there other intangibles in the area of your immediate responsibility which would be lost? A. I think of an important intangible which now exists and which is going to increase in importance. For some time a group of our personnel has been studying further centralization of accounting activities through the use of modern electronic equipment. We haven't as yet ordered a Univac, an IBM 7070 or anything of that size but we have been carefully looking into installations at Boston Edison Company, Arizona Public Service Company and other locations, and in my opinion, it is only a matter of time before the major portion of our volume accounting for all our companies will be done in one or two [1040] locations with the use of computer type equipment. Naturally something of this kind won't be done unless substantial economies are anticipated and if our gas subsidiaries are not a part of the system it follows that they will not share in the economies and it would reduce the economies to the electric companies. It is, of course, necessary to have substantial volume to warrant the purchase or renting of this new equipment.

Q. Do you have an opinion as to the general advantages to each of the gas companies as part of the large NEES System? A. In my opinion it has many advantages, a few of which I have given. In general, large organizations can justify specialized personnel and equipment of much higher caliber and greater efficiency than small organizations can justify; and the large organizations can more effectively

deal with outsiders in areas such as financing, purchasing, regulations, and so forth.

Q. In the treasury and accounting area, upon separation of the gas companies from the NEES System, would there be any benefits to either the independent gas companies or to the remaining electric companies? A. Frankly, I can't think of any material benefits which either the gas companies or the electric companies might realize in the treasury and accounting area upon the severance of the gas companies from the NEES System.

Q. I hand you one copy each of the New England Electric [1041] System Annual Reports for 1958 and 1959 and ask you to identify and describe them. A. These are the Annual Reports of NEES to its shareholders for the years 1958 and 1959. In addition these Annual Reports were mailed to employees, security analysts, investment houses and the like. The reports include information on developments during each year, as well as a discussion of pending matters, together with financial and operating statements. The financial statements, certified by Lybrand, Ross Bros. & Montgomery, independent public accountants, are on both a corporate and consolidated basis and include comparative income statements for each year as well as comparative balance sheets at the end of each year.

Mr. Dunn: Mr. Hearing Officer, I offer these two reports as Respondent's Exhibits No. 74 for 1958 and No. 75 for 1959.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibits No. 74 for 1958 and No. 75 for 1959 were marked for identification and received in evidence.)

By Mr. Dunn:

Q. I next hand you one copy each of the Annual Statistical Reports of NEES for the years 1958 and 1959 and

ask you to identify and describe them. [1042] A. These are Annual Statistical Reports of NEES and its subsidiaries on a consolidated basis for the years 1958 and 1959. Copies of these reports are mailed to security analysts, investment houses, insurance companies and others. These Annual Statistical Reports contain considerable financial and operating data collected by me or under my supervision and the form of this report was determined in the past by representatives of the electric and gas utilities working with security analysts and others. These reports supply information of the division of our business between electric and gas which has not yet been put in evidence in this proceeding.

Mr. Dunn: I offer these two reports as Respondent's Exhibits No. 76 for 1958 and No. 77 for 1959.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibits No. 76 for 1958 and No. 77 for 1959 were marked for identification and received in evidence.)

By Mr. Dunn:

Q. I give you now two white-covered reports captioned New England Electric System—Required Financial Statements and Schedules for Annual Report Pursuant to Section 13 of the Securities Exchange Act of 1934—one for 1958 and the other for 1959. Will you identify and describe these? [1043] A. These are copies of reports filed with the Securities and Exchange Commission per Section 13 of the Securities Act of 1934, but they were actually filed as Supplement A-2 of our Form U5S under the Public Utility Holding Company Act. These are annual reports required by the Commission of companies that have issued securities to the public. They include corporate and consolidated income statements and balance sheets for both 1958 and 1959, the certificate of independent public ac-

countants and supplementary schedules and explanatory notes to the financial statements. They were prepared by me or under my supervision.

Mr. Dunn: I offer these two reports as Respondent's Exhibit No. 78 for 1958 and No. 79 for 1959.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibits No. 78 for 1958 and No. 79 for 1959 were marked for identification and received in evidence.)

By Mr. Dunn:

Q. I next hand you two brown covered reports which include consolidating financial statements for the years ended December 31, 1958 and 1959 and ask you to identify and describe them. A. These are copies of reports filed with the Securities and Exchange Commission as Supplement A-1 of the Form U5S. They [1044] contain consolidating financial statements for the years 1958 and 1959 and give details of the consolidated income statements and balance sheets of NEES and its subsidiaries. These are photo copies of work papers of Lybrand, Ross Bros. & Montgomery prepared by them in the course of their audit for purpose of certifying our consolidated financial statements for the respective years.

Mr. Dunn: I offer these reports as Respondents' Exhibits No. 80 for 1958 and No. 81 for 1959.

Mr. Nowlin: No objection.

Hearing Officer Ewell: Received.

(Respondent's Exhibits No. 80 for 1958 and No. 81 for 1959 were marked for identification and received in evidence.)

By Mr. Dunn:

Q. I now hand you two reports, one captioned New England Electric System Massachusetts Gas Subsidiaries Consolidated—Income Statements for the year ended De-

cember 31, 1958 and Balance Sheets at December 31, 1958 and the other the same except that the Income Statements are for the year 1959 while the Balance Sheets are at January 1, 1960. Will you please identify and describe them? A. These two reports, one for the year 1958 and one for the year 1959, include Income Statements and Balance Sheets for [1045] each of the gas subsidiaries and on a consolidated basis and agree with what is included in the consolidating statements referred to in the previous exhibit. These reports bring together in one exhibit the income statements and balance sheets of our gas subsidiaries as included in the NEES consolidated financial statements.

Q. Were these two reports prepared by you or under your supervision and are they true and accurate to the best of your knowledge and information? A. They were and they are.

Mr. Dunn: I offer these reports as Respondent's Exhibits No. 82 for 1958 and No. 83 for 1959.

Mr. Nowlin: No objection.

Hearing Officer Ewell: Received.

(Respondent's Exhibits No. 82 for 1958 and No. 83 for 1959 were marked for identification and received in evidence.)

May I interrupt to ask about these A-2 supplements. Have they been introduced?

Mr. Dunn: Yes, sir. No. 78 and 79.

By Mr. Dunn:

Q. I hand you a statement which is captioned New England Electric System re Investment in Gas Companies as at January 1, 1960 and ask you to identify and describe it. [1046] A. This statement, with the caption as indicated by you, gives information as to the investment by NEES in the gas subsidiaries as well as return data. The statement shows the investment in each gas subsidiary

and the total investment in gas subsidiaries, as shown by the books of NEES at January 1, 1960, and also the underlying book value of the investment as shown by the books of the gas subsidiaries. As a matter of interest the book investment of NEES in gas subsidiaries has increased about 10 million dollars since 1951, of which about 5.5 million is the book investment in Lynn and the balance of 4.5 million is increased investment in the other gas subsidiaries. I might add we use January 1, 1960 as that was the effective date of the separation of Lynn Gas and Electric Company, i.e., Lynn Gas Company's operations started as of that date. The statement also shows the return on the investment both on an earnings and dividends and interest basis as explained in the column caption and footnote. The column on the far right shows the excess of underlying book value of the investment in these gas companies at acquisition date over the amount of the investment as shown by the books of NEES.

This points up the fact that NEES carries the investment in its gas subsidiaries at about \$5,110,000 less than the underlying book value at the date of acquisition. This means that if divorcement of the gas subsidiaries were required it would increase the NEES balance sheet account for [1047] investment in common shares of subsidiaries in excess of relative net assets by the \$5,110,000, which presumably would also require an increase in the general reserve relating to investments. This is, of course, of major importance to NEES.

Q. Is this statement re investment in gas companies true and accurate, to the best of your knowledge and information? A. It is.

Mr. Dunn: I offer this report as Respondent's Exhibit No. 84.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibit No. 84 was marked for identification and received in evidence.)

By Mr. Dunn:

Q. I next hand you a statement which gives the consolidated capitalization of NEES at January 1, 1960 and a division of this to show the gas subsidiaries with the balance representing NEES and other subsidiaries and ask you to identify and describe it. A. This statement which I had prepared is designed to give recent information about the consolidated capitalization of NEES and its subsidiaries, the capitalization of the gas subsidiaries and the balance which represents NEES and the electric subsidiaries, is captioned New England Electric System and Subsidiaries Consolidated Capitalization and Ratios. [1048] It indicates the effect on the NEES consolidated capitalization of deducting the capitalization of the gas subsidiaries. I do want to point out that no effect has been given to the resulting consolidated capitalization of NEES and its electric subsidiaries for the consideration that would be received by NEES if divorcement of the gas companies became necessary. However, I believe any such proceeds would be invested in electric plant, or used to pay short-term debt, and would not be used to retire permanent or long-term capitalization.

Q. Is the statement true and accurate to the best of your knowledge and information? A. It is.

Mr. Dunn: I offer this statement as Respondent's Exhibit 85.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibit No. 85 was marked for identification and received in evidence.)

By Mr. Dunn:

Q. I now hand you a statement which evidently shows

the gas subsidiaries and gas properties that have been sold by NEES since 1947 and ask you to identify and describe it. A. This statement prepared under my supervision gives a [1049] list of the gas companies or properties that have been disposed of by NEES and its subsidiaries since 1947 when the reorganization plan of NEES was made effective. It indicates that several dispositions have been made of small gas companies or properties which it was not considered economical to retain in the NEES picture. I believe this exhibit speaks for itself in demonstrating that the NEES management has been alert to the desirability of disposing of gas properties that it did not consider properly belonged as a part of the NEES System.

Q. Is the statement true and accurate to the best of your knowledge and information? A. It is.

Mr. Dunn: I offer this statement as Respondent's Exhibit No. 86.

Mr. Nowlin: What is the specific purpose of this exhibit?

Mr. Dunn: To show the disposition and adjustments of gas properties since 1947. It is more for information than for any specific purpose.

Mr. Nowlin: I have no objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibit No. 86 was marked for identification and received in evidence.)

By Mr. Dunn:

[1050] Q. I next hand you a statement which includes Estimated Income Statements for the year 1960 of the present NEES Gas subsidiaries and ask you to identify and describe it. A. This statement, prepared under my supervision, includes an estimated income statement for the year 1960 of each of the present gas subsidiaries as a part of the NEES system and an estimated consolidated income statement of these subsidiaries for that year. It is presented particularly to show the estimated effect of the

several changes that have occurred in recent months to adversely affect these gas subsidiaries. As indicated by the statement, we estimate that the consolidated net income of our gas subsidiaries for the year 1960 will be \$1,615,900, which compares with \$2,368,800 for the year 1959. Most of this expected drop in net income is due to higher wage and fringe benefit costs, higher price of gas purchased, the need for manufacturing peak gas which costs more than we had to pay for peak gas purchased in the early months last year, and some non-recurring Federal income tax credits last year due to settlement of several prior years' taxes. This estimate points up the problem the gas companies would have if they lost the economies now received by them as a part of the NEES System.

Q. Is this statement true and accurate to the best of your knowledge and information? A. It is.

[1051] Mr. Dunn: I offer this statement as Respondent's Exhibit No. 87.

Mr. Nowlin: No objection.

Hearing Examiner Ewell: Received.

(Respondent's Exhibit No. 87 was marked for identification and received in evidence.)

By Mr. Dunn:

Q. Mr. Hanson, you have heard Mr. Webster testify as to the change in the organization and conduct of business of New England Power Service Company as of January 1, 1960. Have you estimated the dollar effect of this change on the various companies in the NEES holding company system, assuming the change had been in effect during the calendar year 1958?

Mr. Nowlin: Will you read that question please?

(Question read by reporter)

Mr. Nowlin: I am going to object to that question. I ran across a statement in the Cities Service case, which is as follows: "Further it must be noted that to accept an es-

timate of present benefits from services rendered by system service companies as a measure of economies which would be lost as a result of independence requires us to assume that financial severance will cast operating units completely adrift, incapable of providing themselves with comparable benefits as cheaply either directly or through mutual arrangements with other operating [1052] units. We cannot make that assumption."

That is page 982, 15 SEC, Cities Service Companies.

Mr. Dunn: Mr. Examiner, this line of questions and answers here are designed to show the effect that the change in the organization of the service company will have on each of the operating companies of the NEES System. This line of testimony is not going to go to the effect of the loss of the Service Company, but for the purpose of showing the dollar effect on the operating company itself and it seems to me it is entirely relevant.

Mr. Nowlin: I do not think the impact on electric companies has any relevancy and you overruled my objection after I cited the Commission's case and I would like a continuing objection to any evidence on the impact of the severance.

Mr. Dunn: It will show the effect on both gas and electric. It will show you have to make an adjustment of the figures shown in the Ebasco report in order to get a true picture.

Mr. Nowlin: As I understand the language I just read the Commission said they do not regard the losses either one way or the other as part of substantial economies as it appears in the statute. They cannot assume that these companies cannot get comparable services just as cheap from some other source.

Mr. Dunn: We are here trying to present a measure [1053] of the loss of economies to the gas companies and also the electric companies during the test year. We think

it is necessary to take a picture of the entire situation and make any major adjustments necessary to give a true picture.

Hearing Examiner Ewell: Well, I am not so convinced that this is material because, as the decision points out, it assumes that these economies could not be effected in some other manner. I do not think that necessarily follows.

Mr. Dunn: Mr. Examiner, let's take the gas company themselves, for a moment. They now have, and back in 1958—the test year, they had a much smaller executive and administrative staff than would have been necessary if they had not been part of the NEES System.

Now, in order to show the difference between that organization and how they would be without the NEES System we have to consider the Executive and Managerial Staff, both before and after.

Of course, the reason that they have a small staff now is because they can draw on the service company and the central organization. It is a measure of all this that we are putting in evidence.

Hearing Examiner Ewell: Well, I will take it subject to a motion to strike later on. This whole question I have got to investigate a little further before I can make a final ruling on it.

[1054] Mr. Nowlin: Exception.

Mr. Dunn: Do you wish the question read?

The Witness: No. The answer to the question is yes. During the summer of 1959, we were discussing with the staff of the Securities and Exchange Commission the recommended change in the Service Company organization and conduct of business and on August 20, 1959, I wrote to Mr. Huson, the Chief of Office of Research and Service Company Regulation of the Commission, with respect to the estimated dollar effect on the NEES companies. The information I gave him will answer your question. Of the

\$924,234 for expenses of NEES alone during 1958 I indicated that about \$600,000 was for salaries and related expenses such as fringe benefits, rents and traveling. I estimated that, if the change in the Service Company organization and conduct of business has been in effect during 1958, 30 per cent to 40 per cent of this \$600,000 would have been chargeable to NEES and the balance would have been chargeable to the operating subsidiaries. The estimated amount chargeable to the operating subsidiaries would have been in the \$350,000 to \$425,000 range and I included in the letter a table setting forth an allocation of these amounts to each of the operating companies on the basis of their weighted gross revenues.

Q. I show you a copy of a letter addressed to Mr. Huson, dated August 20, 1959, and ask if this is the letter to which [1055] you have just referred? A. It is.

Q. Do you still consider the information and estimates given in that letter correct? A. Yes, on the basis stated in the letter.

Mr. Dunn: I offer this copy of letter as Respondent's Exhibit No. 88.

Mr. Nowlin: I will have to object to it on the same grounds I did to the previous question.

Hearing Examiner Ewell: I am going to reserve the ruling on this for the time being.

By Mr. Dunn:

Q. Mr. Hanson, are these estimates reflective of the change in the organization and conduct of business of the Service Company as finally approved by the Commission on December 30, 1959? A. Yes, I think they are. During the summer of 1959 we had been thinking that NEES would continue to pay for all work which related to supervision of the holding company system and the review of the activities of the operating companies and their officials and staffs. However, it was subsequently felt that the cost of

management is a recognized part of the cost of utility service and that the operating companies should bear its reasonable cost. Accordingly, the first amendment to our application as filed in November 1959 was on a slightly different [1056] basis than the proposal being considered in August 1959 when I wrote to Mr. Huson.

Hearing Examiner Ewell: I am wondering if this would not be a good time for a little break? We will take a little recess.

(Brief recess)

Hearing Examiner Ewell: Are you ready to resume, please?

During the recess I had the opportunity to read the Louisiana Public Service Commission case and I have looked over some of the citations from these other cases, I have not had an opportunity to go into it exhaustively, but the Louisiana case seems quite persuasive, and it came out in 1956. And it seems to me, it, at least, is of sufficiency to raise a reasonable doubt on this question.

Mr. Nowlin: You knew the court was reversed subsequently?

Hearing Examiner Ewell: You did not tell me that, no.

Mr. Vorenberg: The reversal was on a completely unrelated subject, Your Honor. It was purely a procedural issue.

Hearing Examiner Ewell: I would like to see that also.

Mr. Vorenberg: We have that here.

Hearing Examiner Ewell: This opinion is not very long. I would like to take a few minutes and look it over before [1057] we proceed on the matter.

Mr. Nowlin: Surely, I have not read it.

Where will you state on the record whatever happened?

Mr. Vorenberg: The situation was—First, the citation, Your Honor?

Hearing Examiner Ewell: 353 U. S. at page 368. It is a 1957 case.

Mr. Vorenberg: As I read the case the reversal is based solely on the fact that it was not error for the Commission not to reopen the proceeding on an unrelated issue. It had nothing to do with the consideration of the electric system's loss of economies, and I think that appears from a quick or detailed reading of the case that this issue was not on appeal before the court and was not decided by the court.

Mr. Nowlin: Then, it becomes a matter of argument which is the better case: the Philadelphia case or the Louisiana case?

Hearing Examiner Ewell: I would like to see what this case says anyhow before I proceed with the matter.

(Brief recess.)

Hearing Examiner Ewell: All right, after reading this Louisiana case in Volume 353 to which reference has been made, I concur in what the Associate Counsel here for the Respondent said, that the reversal was on a ground which did not go to the merits of the question before the Circuit Court except on the question of whether or not its order refusing [1058] to reopen the proceedings was reviewable. I might read some of that to make it clear. On page 371 the Supreme Court opinion in decision says, "The conclusion of the Court of Appeals that the order of September 3, 1955 was subject to judicial review was rested upon the last two sentences of section 11(B) of the Act, 49 Statutes 820, 15 U.S.C. Section 79(k)(B) reading, 'The Commission may order, revoke or modify any order previously made under this subsection if after notice and opportunity for hearing, it finds that the conditions upon which the order was predicated did not exist. Any order made under this subsection shall be subject to judicial review as provided in Section 79x of this title.' It held that the Securities and Exchange Commission's order of September 13, 1955 deny-

ing the Louisiana Commission's petition to re-open the divestment proceeding was an order specifically made subject to judicial review by the quoted language.

"We take a different view. We hold that the order made judicially reviewable by the quoted language are the direct orders mentioned in, and authorized by subsection (B) of Section 11 of the Act, and orders which may revoke or modify any such order previously made under this subsection, and that the quoted language does not include an order, merely denying a petition to reopen Section 11(B) proceedings. It follows that the Securities and Exchange Commission's order of September 13, 1955, denying the Louisiana Commission's petition to reopen the [1059] divestment proceeding was not an order which was subject to judicial review, and the judgment of the Court of Appeals must accordingly be reversed. It is so ordered."

From the language quoted it is quite clear that the Supreme Court did not reverse on the merits of the question that was before the Circuit Court of Appeals on this question regarding the loss of economies to the parent system. So, I think I will read an excerpt from that opinion, subparagraph 5, page 172, volume 235 Fed 2d the following appears: "Giving to the language of Section 79(k)(B) the meaning normally attributed to the words used, we think it quite clear that if, in fact, there is a loss of substantial economies either to the separated utility or to the parent company, then the proviso in Clause A is satisfied, for in such event it is clear that 'each of such additional systems (here the gas system) could not be operated * * * without the loss of substantial economies (to the parent company) which can be secured by the retention of control by such holding company of such system.' Since the term 'loss of substantial economies' is not expressly restricted in the statute to the economies relating to the operation of additional companies, but is in terms broad enough to include

the loss of substantial economies to the holding company as well, it would require judicial legislation for the court to cut it down as contended for by the Securities and Exchange Commission.

[1060] "Neither the legislative history, if we are to consider that, nor the one court decision, relied on by the Respondent discussed this present precise point. We cannot permit our conclusion as to the correct construction of the Act to be overborne by discussion by another court of another feature of the Act from which a contrary construction can, at most, only be inferred. This is too important a part of the section to be interpreted by such method. Furthermore, while we recognize the merit of the Respondent's contention that the interpretation placed on a law by the agency enforcing it, is persuasive, no one will contend that it is not, after all, the duty of the court to construe the acts of Congress, even if such construction differs from the long-accepted administrative policy.

"We do not make any finding here contrary to those arrived at by the Securities and Exchange Commission. We do decide that in making its findings on the crucial questions of loss of substantial economies, the Securities and Exchange Commission refused to give weight to the important fact, which, if as alleged by Petitioner would have presented an entirely different picture."

I think the sum of it all is that it at least raises a reasonable doubt on the question and, as I said before, the Commission may want to have another look at it, so, I am going to rule in favor of letting it come in.

[1061] Mr. Nowlin: Exception to it.

Hearing Officer Ewell: You may have an exception.

Mr. Dunn: Mr. Hanson, I earlier inquired of you with respect to the adjustment shown in the Ebaseo report in the tax area. I ask you again, are these adjustments properly shown in the Ebaseo report?

The Witness: In my opinion, the tax adjustments as reflected in the Ebasco report are accurately shown.

By Mr. Dunn:

Q. Mr. Hanson, while we are on the subject of taxes, would you tell us more about the tax adjustments and the effect of severance upon the allocation of the consolidated tax savings which the NEES gas subsidiaries now realize?

A. An important phase of our work in connection with the Ebasco study was to make tax computations to determine the effect of the increased operating expenses and other adjustments on net income of the gas and electric subsidiaries. The Federal income tax on corporations includes the normal tax of 30 per cent on all taxable income with a surtax of 22 per cent on the amount of taxable income exceeding \$25,000. As I have heretofore stated, NEES files a consolidated Federal income tax return which includes all of its subsidiaries and the consolidated tax is distributed to the participating companies on the percentage of taxable income to consolidated taxable income basis as prescribed by this commission.

[1062] Our gas subsidiaries save from \$150,000 to \$200,000 a year because of this participation and this saving would be lost to these gas companies if they were independent and would be shifted to the remaining electric companies as additional tax savings. I mention all this to indicate that the computation of taxes is not a simple procedure. Though Ebasco had one of their tax experts working with our men on tax adjustments, because of our organization's familiarity with the situation, we took primary responsibility for the computation.

Mr. Dunn: Mr. Examiner, I request at this time I renew my request that Exhibit 88 be received in evidence, that is the letter from the New England Electric System to Mr. Huson of the Securities and Exchange Commission.

Hearing Examiner Ewell: I have not had time to read it yet, so I am going to pass it.

Mr. Dunn: Very well.

Mr. Nowlin: Mr. Examiner, have you ruled or decided to rule on my objection to the tax information coming into the record.

Hearing Examiner Ewell: I think I will make the same ruling, it may stand on a somewhat weaker footing than the other, but I think it is in the same general area. I will make the same ruling and let it in.

Mr. Nowlin: Exception.

By Mr. Dunn:

[1063] Q. Mr. Hanson, we were discussing the change in organization and the conduct of the service company and referred to the letter which was marked as Respondent's Exhibit 88, to what extent, then, should the figures in your August 20, 1959 letter be revised to reflect the change of organization and conduct of business of the Service Company as approved by the Commission on December 30, 1959? A. I don't believe it is necessary to make any change. My letter of August 20, 1959 estimated that from 30 per cent to 40 per cent of \$600,000 would be chargeable to NEES and the balance of from 60 per cent to 70 per cent to subsidiaries. For the first quarter of 1960 the actual charges to NEES for the NEPSCO personnel who were formerly on the NEES payroll equaled 29.5 per cent while charges to subsidiaries were 70.5 per cent and I know of no reason why there should be major changes in subsequent periods. Accordingly, we can use the figures given in my letter which reflect the 30 per cent - 70 per cent split of said \$600,000.

Q. What effect, if any, does this change in the organization and conduct of business of the New England Power Service Company have on the figures which have been produced in this proceeding to show the dollar effect of the

separation of the gas properties from the NEES holding company system? A. It would have some effect. With reference to the gas companies, they would have been charged, on the basis of [1064] the exhibit which has just been offered in evidence, and assuming that 70 per cent of the 1958 NEES salaries and expenses were chargeable to operating companies, an additional amount of \$66,897, and the electric companies would have been charged an additional amount of \$358,103. As to the figures which have been presented showing the effect of severance on the gas properties, the increase in operating expenses of \$1,385,800 would be reduced by \$66,897 if this expense had been charged to the gas companies in 1958 and consequently the reduction of \$957,600 in gross income before interest and dividends would become a reduction of \$925,500. These adjustments are necessary to reflect what the situation would have been had the gas companies been paying for the services which they obtained during 1958 without cost.

Turning to the figures showing the effect on the fourteen electric companies caused by severance of the gas business, in my opinion the additional charge of \$358,103 to said companies, had the Service Company change of organization and conduct of business been in effect in 1958, would not be affected by the separation of the gas business.

This is because the electric companies would not be staffed with additional executive and administrative personnel and would continue to draw on the System's central organization. However, to the extent that the Service Company executive and administrative personnel is not reduced to offset the loss of \$66,897 which would have been charged to the gas companies [1065] during the test year period, there would be that amount of additional cost to be borne by the remaining electric companies and such additional cost would be a result of the separation and divestment of the gas business. If the full \$66,897 is added to

the increased operating expenses shown in the Ebasco report for electric companies upon separation of the gas companies, the amount of increased operating expenses for the electric companies will be \$730,300 while the reduction in the net income of the electric companies would be \$433,800 and, after giving effect to the additional \$249,300 consolidated Federal income tax saving that would be received by the electric companies because of divestment of the gas companies, would be \$184,500.

Mr. Nowlin: I am going to move to strike the answer to the last question on the grounds that I quoted from the Cities Service opinion to the Commission.

Hearing Examiner Ewell: You mean about the taxes?

Mr. Nowlin: Well, the tax effect you have ruled on. It is the effect of the losses to the service company and the increased cost to the gas companies by virtue of the severance.

Hearing Examiner Ewell: As far as the tax segment, I wanted to add to what I said the reason I ruled in favor of letting that come in was the statement by Counsel for the Public Service Commission that it is a matter given weight in rate proceedings. It seems it has a direct bearing on the [1066] public interest question, but on this other matter about this service company I am more in doubt about that.

Mr. Nowlin: I still want to reserve on that, I mean you still want to reserve your ruling.

Hearing Examiner Ewell: Just how much of the answer do you want stricken?

Mr. Nowlin: I think the whole answer is so interwoven with statistics that the whole answer should be stricken and the question related if he wants to elicit some part of it.

Mr. Dunn: I am apparently not quite clear just what

his objection is here. Perhaps it would be better if he were to restate it.

Mr. Nowlin: I read in the quotation before. The Commission said, "Further it must be noted that to accept an estimate of present benefit from services rendered by System Service Companies as a measure of economies which would be lost as a result of independence, requires us to assume that financial severance will cast operating units completely adrift, incapable of providing themselves with comparable benefits as cheaply either directly or through mutual arrangements with other operating units. We cannot make that assumption."

The computations read into the record were showing the losses to the gas company by virtue of the separation and the loss of the service company servicing them.

[1067] Mr. Dunn: Quite to the contrary, the question does not reach that point. The question and answer relate to the costs of the executives which were put on the NEPSCO payroll and how much of that cost would have been charged to each of the operating companies in 1958 had this rearrangement been in effect during that test year, and it does end up with an adjustment of the figures shown in the Ebasco report as a result of that allocation.

We are not in this answer though trying to show any loss of economies resulting from the severance of the gas companies from the service company.

Mr. Nowlin: I do not want to foreclose you from putting in any relevant evidence. Maybe I misunderstood the answer. It seemed it was interwoven with calculations on this particular point.

Hearing Examiner Ewell: I made that inference myself as I heard it, but in view of your statement that it is not the purpose of it, that seems to eliminate the basis of the objection because the basis of it is loss of economy.

Mr. Nowlin: As I understood the question, I thought

it was interwoven with a lot of assumptions that bore on this particular point. If it did not I withdraw my objection.

Hearing Examiner Ewell: Well, where are we now?

Mr. Nowlin: I am relying on counsel. I have not the questions before me and it is hard to sit here and listen [1068] with a long one here.

Hearing Examiner Ewell: Why not have it reread?

Mr. Dunn: We can do it that way or if it would satisfy Mr. Nowlin, we suggest he read the record when it becomes available and at that time we would be glad to consider a motion to strike if he still thinks it is not pertinent.

Mr. Nowlin: That puts counsel at a considerable disadvantage to go back over and see what I am going to object to.

Hearing Examiner Ewell: Yes, I am inclined to agree with that. I think as far as possible I would like to dispose of these matters as we go along because of the size of these records. I suggest that we read that question and answer again and we will all get another look at it.

Can Counsel go back to the question and the answer?

Mr. Dunn: You would like us to state it again?

Hearing Examiner Ewell: No, I think it would take up more time and we might as well have it read.

Will you read the question and answer?

(Reporter read question and answer)

Mr. Dunn: Mr. Hearing Examiner, if I may, I would like to point out that we are talking here about the allocation of a substantial amount of money, \$425,000 among the operating companies in the system. These are actual dollar figures that we are talking about. I think it is material that the record [1069] should have a full disclosure and discussion of it. I still think that the citation that Mr. Nowlin has made is not pertinent to this question and answer.

Hearing Examiner Ewell: That is what I would like to hear.

Mr. Dunn: Well, I do not think it is pertinent.

Hearing Examiner Ewell: Why?

Mr. Dunn: Because I am talking here about not the dollars arising from severance of the gas companies from NEES System. I am talking principally about the dollars, the \$425,000 which these companies will have to bear as a result of the service company reorganization.

Mr. Ewell: You mean the gas companies would have to bear that?

Mr. Dunn: The gas companies bear their portion which is \$66,897. The other goes to the electric companies. This is getting into the record basic figures to be used in the measuring of loss of economies when we come to later phases of the case.

I would like to just briefly refer to the quotation from the Cities Service case. It seems to me that that is an indication that the Commission felt the company did not put in specific enough evidence on the loss of economies arising from severance from the service company. It indicates that they had estimates and that was not sufficiently specific to [1070] be given weight by the Commission. Here we are arguing with the figures.

Hearing Examiner Ewell: Again I will have to examine that case more carefully before I rule on it, and I would like to pass this for the time being. If you can go into something else we are nearing the lunch hour and I can do it during the lunch hour and we will rule when we reconvene.

Mr. Dunn: All right.

By Mr. Dunn:

Q. Mr. Hanson, have you considered the effect that the separation of the gas companies from the NEES System would have on the security holders of the gas companies?

A. Yes. For the test year 1958, taking into consideration the figures shown in the Ebasco report, reduced by the

net effect of the \$66,897 of additional billing by the service company, the consolidated net income of the gas companies would have decreased about 45%. For 1959, on the same basis, the consolidated net income of the gas companies would have decreased about 38 per cent and from 1960 on the same basis, the estimated consolidated net income for the gas companies would decrease about 55 per cent. To the extent that net income losses are not recovered by increased earnings from rate increases or otherwise, the stockholders would be seriously affected and the debt holders would suffer in reduced coverages of their interest requirements and lower ratings for their bonds which would make it very difficult to do financing on a reasonable basis.

[1071] Q. Mr. Hanson, in your opinion as the senior financial and accounting officer of the NEES System, are the operations of the gas utility companies confined to a single area or region within Massachusetts which is not so large as to impair (considering the state of the art and the area of the region affected) the advantages of localized management, efficient operation and the effectiveness of the regulation? A. I am of such opinion.

Mr. Nowlin: I am going to object. It is the statutory language. It requires application of legal terms and is the words that appear in the statute. I do not think Mr. Hanson is qualified to answer and if he did it would be purely self-serving.

Hearing Examiner Ewell: He has been in the business for many years. How long?

The Witness: Forty-two.

Mr. Nowlin: He has not been interpreting the Act for 42 years.

Mr. Dunn: As I stated yesterday we consider the statutory standards to call for opinion of factual matters and

feel that a qualified senior officer of the system who has long experience is fully qualified to give an opinion on these factual matters.

Hearing Examiner Ewell: Mr. Hanson, you have testified in a good many of these proceedings, haven't you?

[1072] The Witness: I have.

Hearing Examiner Ewell: You have lived with these problems for many years, haven't you?

The Witness: I have.

Hearing Examiner Ewell: I think it is reasonable.

Mr. Nowlin: I have the highest personal regard for Mr. Hanson and his abilities. I do not think he is competent to testify in this field, however.

Hearing Examiner Ewell: I think it goes to the weight. I think he is an expert and he is entitled to express an opinion, and I think he is entitled to some consideration too. So, I am going to allow it. The objection is overruled.

Mr. Nowlin: Exception.

Hearing Examiner Ewell: Will you read the last question, please?

(Question read by reporter.)

The Witness: In my opinion, they are.

By Mr. Dunn:

Q. Are you further of the opinion that the gas utility companies of the system are so located and related that substantial economies are effectuated by being operated as a single coordinated system? A. I am.

Mr. Nowlin: Same objection.

Hearing Examiner Ewell: Same ruling.

[1073] Mr. Nowlin: You wouldn't expect Mr. Hanson to answer no?

By Mr. Dunn:

Q. Are you further of the opinion that the continued combination of the electric system and the gas system of the present NEES System under the control of NEES is not so large considering the state of the art and the area

of the region affected as to impair the advantages of localized management, efficient operation or the effectiveness of regulation?

Mr. Nowlin: Objection.

Hearing Examiner Ewell: You may answer. Overruled.

The Witness: I am.

By Mr. Dunn:

Q. Finally, are you of the opinion that the gas companies of the NEES System cannot be operated as a system independent of the electric utility system of the NEES System without the loss of substantial economies which may be secured by retention of control by NEES?

Mr. Nowlin: Objection.

Hearing Examiner Ewell: Same ruling.

The Witness: I am.

Mr. Dunn: We request that Mr. Hanson be excused, subject to recall.

Mr. Nowlin: I would like to ask a couple of questions.

[1074] Hearing Examiner Ewell: All right.

Cross-Examination

By Mr. Nowlin:

XQ. Was your response based on the assumption treating these costs collectively or separately? A. Both.

XQ. Have you had any information yet on the collective operation of the system on which to base that conclusion?

A. Yes.

XQ. Is that in the record? A. I do not believe so, as yet.

XQ. Directing your attention to Exhibit 87, which is the estimated income for the year ending December 31, 1960, are there any pending rate cases with respect to any of these subsidiary companies? A. There are not.

XQ. So that there would not be any changes because of pending rate cases? A. No changes of rates are assumed in this statement.

XQ. I would like to inquire as to whether or not the Ebbaseo Report, the study of expenses of the service company, does that give effect to the organization that occurred around December 30, 1959? It does not, and that was the purpose of my giving those figures, which indicate the effect of that.

[1075] Mr. Nowlin: I see. That is¹ I have at the present time.

(Witness excused)

(Discussion off the record.)

Hearing Examiner Ewell: We will recess for lunch until

1:45 p. m.

(Whereupon, at 12:15 o'clock P.M. the hearing recessed, to reconvene at 1:45 o'clock the same day.)

[1076]

AFTERNOON SESSION

1:40 p.m.

Hearing Examiner Ewell: Gentlemen are you ready?

Mr. Nowlin: Yes, sir.

Exam. Ewell: Perhaps we ought to take up this question again about the loss of economies due to the severance or due to the loss of services of the ice company.

Counsel for the Division has cited the Commission's Decisions, appearing in Volume 15 of the Commission which is dated page 962 et seq. It is stated in this opinion that counsel quoted is May 5, 1944, and the language which considered that pretty clear. The Commission evidently from the Service the loss of economies due to the severance however, the Company was not of probative value. The Commission did in that case also reject the figures at face it was not of, apparently even accepting the importance. It value, they were not of sufficient relevance. It states here on page 981:

"Those savings are estimated at \$96,181 annually. Were we to accept that figure as fully accurate and relevant we could not find that substantial economies would be lost for the claimed savings are only 1.1 per cent of the 1941 gross operating revenues of Arkansas Gas which were \$8,462,759 and only 2.7 per cent of the 1941 operating expenses of \$3,463,253 not including taxes and appropriations for depreciation and depletion and only 1.5 per cent of total expenses but the figure cannot be accepted as faithfully representing a savings [1077] which will be effected when Cities has complied with Section 11-B-1."

And that phrase is italicized. "The argument is predicated upon retention of—" and then somewhat further follows the quotation that Mr. Nowlin, I think, has already referred to in the record, but just because it is to fill out the thought I might as well read it. It is only one sentence. I will read it. "Further, it must be noted that to accept an estimate of present benefit from services rendered by a system service companies—" and you gentlemen are familiar with the rest of the language from Mr. Nowlin's quote this morning, which ends with "We cannot make that assumption."

That language is pretty clear, gentlemen. Of course, it does not say that the evidence should be excluded, but it certainly indicates that the Commission felt that it was not entitled to weight. Now, I would like to know if counsel for the Respondent can put it in any light that this rather clear language seems to put it in if they can put it in any other light.

Mr. Dunn: If it please Your Honor, I have not had a chance to examine the SEC decisions on this point. I am aware of an earlier Cities Service decision in 14 SEC, page 28, and apparently somewhere around pages 46 to 48 they again were stating that these alleged losses of economies upon severance of the companies from a Service company

should not be given [1078] great weight, but they went on and said apparently accepting the estimate and so forth, the estimates are not substantial. Again, an indication as you indicated that they accepted the testimony, but then considered it on the probative basis.

Hearing Examiner Ewell: What would you have to say on the question of the relationship of the results to the overall picture?

In other words, the Commission pointed out it was only one per cent of the expenses and income. Now, using that as a criterion how would your figures look?

Mr. Dunn: I think it might be wise to state at this time that each case should be considered on its own merits. Each system has a different type of service company. There are different amounts of dollars involved. We feel that to give a true picture of the effect of separation we must first show all of the losses that will result if these companies go out on their own. We will then try to show what of those losses might be salvaged by putting the companies together on one basis, or another. So, it will, in the end, we will have evidence in the record that will show the materiality of the effect of the severance not only from the service company but from all other portions of the NEES system.

Hearing Examiner Ewell: That would have been my next question, but you did not answer the one I asked. I do not think you answered the one I asked. I asked you how your figures would look in respect to the criterion or criteria set up in this decision [1079] that I read from the language that I read where the Commission pointed out that even accepting the figures at face value, they were relatively unimportant because they bore such a small relationship to the totals involved, expenses and income.

Mr. Dunn: I do not have the percentages at my fingertips, but we are showing that the losses of operating expenses or the increase of operating expenses to the gas

companies would be around a million, five-hundred thousand dollars.

That the increase in operating expenses to the electric companies—

Hearing Examiner Ewell: I think that might be a point that would be important. Perhaps it was not reasonable to ask you to do it in just a mental calculation, but maybe it would be worth taking the time to work it out in a way that would be clear for the record.

Mr. Dunn: We are planning to get this type of evidence into the record. In fact, as I recall, Mr. Hanson's answer this morning the net income of the gas companies before interest and dividends would be reduced 47 per cent as a result of this severance.

[1080] Hearing Examiner Ewell: Well, that sounds very substantial and maybe this would put this class of evidence in a little bit different light.

Mr. Nowlin: You do not mean reduced to 47 percent by virtue of the losses to the service company?

Mr. Dunn: No. The whole effect of the severance.

Hearing Examiner Ewell: How long would it take you to answer the question that I raised using this formula that is in this decision here that I read? In other words, take your loss of economies and set it up in the same way in relationship of the gross revenues, and the operating expenses.

Mr. Dunn: Well, I believe those cases are talking about total losses and not just losses resulting from severances of the service company alone. This is what I would like the privilege of a more careful examination of the point.

Hearing Examiner Ewell: The case says "It is argued that the savings effected through the use of gas"—

Mr. Dunn: I think some of these cases are some that—some of these cases being referred to have much simpler issues and factual problems than we have in this case.

Hearing Examiner Ewell: Is it not a comparable figure with your figure, for instance in the above case doesn't the \$98,000 represent one of the figures read off by Mr. Hanson?

Mr. Dunn: We are giving the figures on the basis of an [1081] entire separation from the NEES system. I think those cases relate to the loss of Service Company. For example, in this case in 14 SEC they are discussing an increase of \$76,000 in round figures in administrative expenses to replace the loss of services from a service company, and apparently that was the only loss of economies alleged in the whole case, so it would pinpoint it.

Hearing Officer Ewell: Yes, but I understood Mr. Nowlin's objection to be based on the fact that your figures included this and he said it ought to be stricken on the authority of this case, which held that they were not of probative value.

Mr. Nowlin: What is the dollar amount involved in service company loss?

Mr. Dunn: I do not know that we have figures isolated for that loss alone. We have developed these figures on the basis of total effect of severance.

Mr. Nowlin: You know the total amount involved. Don't you know the component parts of this total amount.

Mr. Dunn: Maybe if we took a specific example such as an executive staffing of an independent gas company, you have to increase the staff and that will supplement not only the existing staff, but the services from the gas division headquarters and from the Service Company and from the advice that they have had from NEES. We have not tried to break those figures down between those given [1082] categories that I have mentioned. It would be quite a task and I am not sure that you could get any meaningful allocations.

Mr. Nowlin: Apparently these cases did give a definite

figure that it could, where the company would be affected by a certain dollar amount from the loss of a Service Company. I think you people should do the same thing.

Mr. Dunn: May we have a couple of minutes recess to consider this?

Hearing Examiner Ewell: Yes, I think I might say that Mr. Hanson's answer perhaps ought to be read back again because he gave a lot of figures there and maybe I misunderstood them, but it seemed to me he assigned certain dollar amounts there to the loss of economies from the severance, the inability to have the services of NEPSCO Service Company.

Mr. Dunn: Incidentally, if I could digress just a moment, in view of Mr. Nowlin's last question of Mr. Hanson this morning and his answer, I believe his objection to the specific question and answer under discussion was perhaps immaterial. Now, I wonder whether he would change his request.

Mr. Nowlin: The question still is what I understood it to be, or, the way I understood it would have some elements of this issue which we are concerned with, but there are other questions which I objected to, and rather than leave an objection to this particular line, I withdraw that, but I renew my general objection as to any evidence or the admission of [1083] any evidence coming in here with respect to the loss of revenue by the severance of the Service Company.

Hearing Examiner Ewell: As I understand counsel now says there is no dollar value assigned specifically to loss of services of the Service Company, is that right?

Mr. Dunn: That was my statement.

Hearing Examiner Ewell: Then it seems to me that it is all so inextricably woven to the whole picture, I do not see how it would be separated.

Mr. Dunn: It would be very difficult.

Mr. Quarles: And in the case relied on there was clear consideration for that for various purposes. This is a very serious aspect of this whole case, and we would appreciate the opportunity of examining the cases and being able to see what the total effect of them is, as bearing on this question. It is certainly true that in many, if not all, the issue is clouded by other facts, and that it cannot be isolated. Certainly when you are taking into consideration whether severance will produce the substantial losses of economies, it would not make much sense to measure each single component of that and determine whether it is a substantial loss alone. If in the aggregate the amount is such that it is substantial, and I can see no point in undertaking to determine what percentage of your total operating expenses or your total losses result from one of the factors, and saying that because [1084] it is a relatively small amount it should not be considered at all. I am not sure of my ground on this particular case because I have not read it for some time, but I think that that figure alone was being claimed as constituting substantial loss. We are not making that claim. We are not claiming that that single item is substantial loss in and of itself. But we are claiming that it is one of the factors to be considered.

Hearing Officer Ewell: It is part of the total of the substantial loss.

Mr. Quarles: That is right, sir.

Mr. Nowlin: Just how much of this total is rested on this one item?

Mr. Quarles: Our evidence will provide opportunity for analyses that you can see how it is made up, I am sure, when it is all in.

Hearing Examiner Ewell: Off the record.

(Discussion off the record.)

Hearing Examiner Ewell: Under all the circumstances, I think the way I will have to leave it, unless you want me

to reserve on it, the way I would be inclined to leave it at this point, is to leave it in the record and take it with the understanding that Mr. Nowlin would have a right to move to strike it at a later time. Mr. Nowlin, if he finds that the evidence is pointed out in such a way that it can be properly [1085] excluded or excised from the rest of it, is that right?

Mr. Dunn: It is.

Mr. Nowlin: It seems to me if this total figure includes items which are not relevant, then the whole figure fails. In other words, if you cannot examine into the contingent parts of this figure, how do we know how much is included in that that should not be in the record?

Hearing Examiner Ewell: The Respondent has the burden of proof. You have raised the question. I think it would be up to them to furnish some sort of supporting data for their own position.

Mr. Quarles: Our position, first of all is that this is not irrelevant and should not be held irrelevant because of its own smallness. If combined with others, it makes a total that is substantial. Secondly, we would expect when the record is complete the figures will be available from which this breakdown can be computed, and, as I said before, if there is a problem on that we will certainly undertake to provide additional figures.

Mr. Nowlin: The Commission has delineated in several of its opinions the items that may be included, and if you are including several items that the Commission says are not properly included, it seems it throws the whole estimate off unless we can isolate certain parts of them.

Mr. Quarles: Well, we will undertake to isolate them [1086] so that any of them subject to differences of opinion can be identified.

Mr. Nowlin: I think we have the tax matter and we have this item, and I do not know what other items that may be

defective. You have got to pull those things out and get to the real meat of it.

Mr. Quarles: Yes, and as I said this morning, our theory of the case is that if we have an adequate record to enable each of these to be examined and adequate information, a final decision by the Commission, regardless of which way it decides, should be included or excluded, then we have the proper kind of a record.

Hearing Examiner Ewell: As I understand, you virtually conceded this is relatively small.

Mr. Quarles: No, sir. We have not conceded that it is relatively small. We have argued that the size of it alone is not a ground for excluding it.

Hearing Examiner Ewell: Well, it does seem that it would be in your interest if it would be possible to assign some kind of a dollar value to it.

Mr. Nowlin: That might have a very important bearing on the question of whether or not they needed eight presidents.

Mr. Quarles: Various of these things it is impossible to pass on until the record is complete. We recognize the burden is on us to prove our case, to prove substantial [1087] losses of economies of the kind that are properly taken into account.

Hearing Examiner Ewell: All right. Now, getting back onto the record, then, the record will show that the record is being taken now subject to whatever revision may be made at a later time on motions directed toward the evidence at a later time. It is in now, though, for all purposes. Now, there is one letter that I have not disposed of, to Mr. Huson, Exhibit 88. Was this objected to?

Mr. Nowlin: Yes, sir.

Hearing Examiner Ewell: On what grounds?

Mr. Nowlin: The ground that it related to the very matter we have been discussing here.

Hearing Examiner Ewell: Which part of it?

Mr. Nowlin: The statistical information on the gas companies.

Hearing Examiner Ewell: What is the relevancy of this, Mr. Dunn?

Mr. Dunn: It is to put into the record evidence of what the actual operating costs of the Electric and Gas subsidiaries would have been during 1958 if this Service Company adjustment had been in effect during that year.

Hearing Examiner Ewell: What service company adjustment are you speaking of now?

Mr. Dunn: At the beginning of this year the SEC issued [1088] an order which permitted the executives of the holding company to go on the payroll of the service company. It has meant that the Service Company can now bill to the operating companies the charges from Management Services. This used to be borne entirely by the holding company alone. These particular charges, that this letter is referring to, are given in order to show the effect of the severance of the gas properties from the NEES system in the test year 1958.

Hearing Examiner Ewell: Would that be a benefit? Wouldn't that increase the cost of the Operating Company?

Mr. Dunn: It certainly will and means in the case of the gas companies that the alleged loss of economies is going to be less.

Hearing Examiner Ewell: By reason of this situation?

Mr. Dunn: Yes.

Mr. Nowlin: This is all put in for the purpose of showing the adverse impact to the gas companies?

Hearing Examiner Ewell: You want to show the other side of the coin.

Mr. Dunn: We want to show it in its true light, favorable and unfavorable.

Mr. Nowlin: I will have to object to it on two grounds.

Insofar as it goes to the electric company, I say it is irrelevant, and insofar as it relates to the effect on the gas company it is immaterial because the Commission held [1089] it has no probative value. Mr. Examiner, I do not think it does too much damage, so I will withdraw my objection to this exhibit, but I want the standing objection to continue on any evidence coming in here with the impact of the service company on the gas companies insofar as it relates to an attempt to establish a substantial loss of economies.

Hearing Examiner Ewell: All right. I will receive it with your reservation noted in the record.

Now, is there anything else that I have forgotten or omitted that is pending in reference to Mr. Hanson's testimony?

Mr. Dunn: There is nothing further, sir.

Hearing Examiner Ewell: All right, do you want to call another witness?

Mr. Dunn: I would like to call Mr. Lother at this time.

Whereupon

ELMER H. LOTHER

was called as a witness on behalf of the Respondent, and having been first duly sworn, was examined and testified as follows:

Direct Examination

Hearing Examiner Ewell: Your full name, please.

The Witness: Elmer H. Lother.

By Mr. Dunn:

Q. Mr. Lother, would you give your educational and [1090] business background? A. I attended school in Warren, Rhode Island. I also spent several years studying accounting and related subjects at Bryant and Stratton Commercial School, which is now Bryant College, in Providence, Rhode Island. In addition, I have participated in

several educational programs pertaining particularly to utility accounting and management. The most recent educational experience was attendance at an executive training course for gas, electric and telephone company executives at the University of Michigan.

Since September 13, 1920, I have been employed by companies comprising NEES to its predecessors. I started out in the accounting department of The Narragansett Electric Lighting Company as an accounting clerk. Over the years, my duties have ranged in all areas of retail company treasury and accounting operations, systems and methods and internal audit functions. During many years of supervisory, administrative and executive responsibilities, I have been familiar with many activities related to local treasury and accounting operation.

At present I am a member of the Executive Committee of the Accounting Division of Edison Electric Institute and also a member of the Advisory Board of the Accounting and Financial Division of the Electric Council of New England.

Q. I take it then that you are particularly familiar with the retail treasury and accounting operations. [1091]
A. About 28 of my 39 years of service have been devoted to actual work within the local treasury and accounting organization. During the other years I have been located in Boston and my duties have been relative to retail treasury and accounting activities.

Q. And what is your present position and responsibility within the System? A. I am Vice President and Comptroller of New England Power Service Company. My responsibilities include supervision of the activities of the internal audit group, and the systems and methods group of New England Power Service Company, as well as supervision of all retail treasury and accounting operations in the subsidiary companies of both gas and electric.

Q. Mr. Hanson has previously described his responsibilities and the functions of certain groups that are under his direct supervision. Will you describe your relationship to Mr. Hanson and to these groups? A. I report to Mr. Hanson concerning those responsibilities or functions which I previously mentioned and which are under my immediate supervision. In addition, however, many of the groups of New England Power Service Company are performing functions which have a very definite relationship to the activities in the retail treasury and accounting organization which is under my supervision. Therefore, I am directly concerned [1092] with the relationships between the retail treasury and accounting people and the other groups in New England Power Service Company.

Q. Will you illustrate? A. One example of this might be with respect to the activities of the Purchasing Department. All of the companies both gas and electric, in their day to day activities use printed forms, office supplies and office equipment. These supplies are requisitioned by local personnel through the Purchasing Department of the New England Power Service Company. Such requisitions are reviewed by the Systems group to insure use of materials which have been adopted as standard and to group requisitions for similar items so as to purchase in volume and obtain the materials at the lowest cost.

Another area is a close relationship between those persons handling labor relations and personnel matters to obtain correct interpretation of contracts and personnel advises to insure uniform handling by local supervisory and payroll personnel.

In another area we work with all departments when new laws, regulations or policy decisions make necessary procedures and form changes. This, of course, is in addition to the constant revision and updating of forms and pro-

cedures by the System and Methods Group to obtain the most efficient and most economical results.

Q. You mentioned that you have direct supervision over the systems and methods group. Will you describe this group and its functions? [1093] A. The systems and methods group, which includes 6 people, makes studies for the various companies in connection with the handling of various accounting aspects of local operations including the interpretation of classifications of accounts prescribed by regulatory bodies. It also continually reviews accounting forms, reports and other papers with a view to standardizing and simplifying the accounting procedures of the companies. This group produces standard forms and procedures and maintains a control of these standards through a review of purchase requisitions. As a part of this systems and methods group, we now have a committee consisting of two accountants and an engineer who are making a continuing study of new developments in the machine and electronic accounting field with particular reference to the advisability of utilizing electronic data processing equipment for system activities.

Q. Will you now describe the internal audit group? A. This group consists of 11 persons. The travel auditors in this group make comprehensive annual audits of all System companies. This not only provides for internal controls but also enables our independent accountants to reduce the scope of their audit procedures. In connection with the periodic audit and the examination of accounting records and methods, the internal auditors prepare reports reviewing and making recommendations for corrections or changes as circumstances warrant.

The internal audit or travel audit group provides [1094] a source of trained accounting personnel in the event of sickness or other disability among local treasury personnel. The personnel in this group received an excellent training

and are candidates for future supervisory positions in the companies when the need arises.

Q. Mr. Lother, will you now tell us something about this treasury and accounting organization which you supervise?

A. The present retail treasury and accounting organization is a product of the corporate and functional simplification carried out by the NEES System over a period of years.

Q. What do you mean by "retail"? A. I mean those companies principally engaged in selling gas and electric service to residential and other ultimate consumers as contrasted with the Power Company which is wholesale and NEPSCO which is engaged in providing services.

Q. Why do you say that the organization is a product of past corporate and functional simplification? A. As corporate and management lines have been changed over the years in connection with consolidations, mergers and sales of property, local treasury and accounting personnel have been reorganized and consolidated into larger units. Realizing that each of these changes was merely one step in a series of many steps in the corporate and functional simplification of NEES, the treasury and accounting organization naturally had to adapt itself to this changing pattern over a [1095] period of years. The establishment of a district or divisional basis of operation which to a degree ignores corporate lines, provided the framework whereby we could make continuing changes within the organization. Therefore, as companies were reorganized and consolidated into larger units, personnel requirements could in many cases be reduced over a period of time. The flexibility of such an arrangement has been demonstrated time and time again over the years. Along this same line it is apparent that the organizational patterns for these various districts or divisions may vary. The requirements of the retail treasury and accounting organization are dependent in a large degree upon the size of the companies, the character

of the territories served, the volume of work in each district or area. We have not attempted to impose a strict organizational pattern in all of the areas but rather have adapted the organization to the particular requirements of each different situation.

Q. Will you explain this further? A. In the central and western Massachusetts areas which operate out of Worcester, where we cover a relatively large territory when measured by square miles, the organization is highly decentralized. This situation, however, is substantially different from that which we have in Malden where we have a highly centralized operation. In turn, the Lawrence organization is somewhere between the highly centralized organization in Malden and the decentralized operation emanating from Worcester.

[1096] Q. Wouldn't there be additional advantages to be obtained from further centralization of operation in some of these areas? A. This may be true. However, NEES has only partially completed its corporate reorganization and simplification program and some of the further advantages of centralization will come along in the years ahead. We are, of course, combining office operations wherever possible to do so and working towards an ultimate centralized operation, without waiting for corporate changes.

Q. What type of equipment do you now use? A. At the present time we utilize a wide variety of methods, equipment and procedures. We use punch card equipment to varying degrees at four locations in Massachusetts and one in Rhode Island. In some areas, all phases of treasury and accounting functions are performed, in part, on machine accounting equipment while in others machine use is primarily in customer accounting. However, by and large, most general accounting functions are performed manually. With respect to customer accounting, we utilize

various types of key driven equipment or punch card equipment. However, as we proceed in the future to further centralization of operations, we expect that standardization and mechanization will follow.

Q. Do you expect to make use of major electronic data processing equipment in the future? [1097] A. I feel reasonably sure that the treasury and accounting organization will utilize more of the electronic equipment which is being developed to perform clerical functions. We, as I previously mentioned, now have a group making a continuing study as to the advisability of utilizing some of this equipment. However, we expect to move slowly in this area, particularly since the manufacturers seem to be developing and making available new and better equipment almost every day in this rapidly changing field.

Q. Does the fact that your accounting involves gas and electric business complicate your problem and delay standardization and mechanization? A. No—not in any way. As a matter of fact, the similarity of the accounting functions and the volume resulting from the combination of gas and electric makes it easier to economically use larger equipment.

Q. What are the functions of the retail treasury and accounting organization? A. Generally the personnel in the retail treasury and accounting organization are those engaged in the day to day accounting activities of the operating companies. This includes general accounting, plant accounting, payroll accounting, customer accounting and collections, and stores accounting operations. In addition, local insurance activities are within the treasury and accounting organization. Safety activities and medical activities also are often closely related [1098] to insurance activities and as such some may come within the retail treasury organization. In some areas customer service order functions are performed within the treasury and accounting

organization. In addition to maintaining all basic records the treasury and accounting organization produces all necessary reports and statistical data.

Q. What are the advantages of combination gas and electric operations within the treasury and accounting organization? A. I will touch some of the more obvious advantages. One very important area that has many advantages is in the customer accounting and collection function. The reading of meters of combination customers by one employee, maintenance of bookkeeping records by one clerk, the joint cashiering function, including jointly used collection agencies and other facilities, and the area of credit and field collections of overdue accounts are some of the more important with definite advantages.

Q. Returning now to the retail treasury and accounting organization will you tell us something about it? A. There are presently seven Treasurers or Assistant Treasurers of subsidiary companies who are referred to as Treasury Representatives and who supervise seven groups engaged in local treasury and accounting activities for the retail companies. Five of these groups are in Massachusetts, one in Rhode Island and one in New Hampshire.

Q. How many of these groups are joint operations with [1099] gas and electric treasury and accounting activities? A. The five groups in Massachusetts are joint operations while those in Rhode Island and New Hampshire are entirely electric operations.

Q. What is a Treasury Representative? A. The Treasury Representative is the field representative of the treasury and accounting organization of the NEES System. He is either a Treasurer or Assistant Treasurer of the retail companies in his area. The Treasury Representative performs both line and staff functions, with the greater emphasis being placed on his line function. By this I mean he is responsible for all personnel in the local treasury and ac-

counting organization engaged in performing the general accounting, customer accounting, stores accounting and similar or related activities.

Q. What is the relationship of the Treasury Representative to the local management? A. The Treasury Representative performs a very important function in the local management picture. A considerable amount of his time is spent in consultation with local management. This is particularly true with respect to regional electric management and to the President of the Gas Division. The Treasury Representative is a principal member of the management team and is consulted on the many phases of company operation.

Q. What is the relationship of the Treasury Representative to the central organization? [1100] A. The Treasury Representative is the principal link between the local treasury and accounting organization and the personnel of New England Power Service Company. He maintains the continuous flow of information to and from the various functional groups or specialists of New England Power Service Company and the local organization.

Q. What part does the Treasury Representative play in the determination of overall accounting policy? A. The Treasury Representative takes an important part in the development of system policy. He participates in the establishment of system policy and procedure in many ways. One way is through Treasury Representative meetings held for the purpose of discussing mutual problems and reaching conclusions as to System policy or procedure. Another way is use of local staff and supervisory personnel as a committee to assist in writing or rewriting System procedures or in establishing uniform practices and standard forms. In other words, these men directly or indirectly participate in the establishment of all procedures and practices which they must supervise.

Q. What advantages does the central organization bring to Treasury Representative meetings and to the committee activities referred to? A. Upon request, Service Company specialists attend meetings to present matter originally or to evaluate directly comments [1101] from the Treasury Representatives and others on subjects which have been presented for discussion.

Q. I believe you said there were presently five Treasury Representatives in Massachusetts. A. Yes. They are located at Worcester, Lawrence, Malden, Lynn and Quincy.

Q. Would you describe the duties of the Treasury Representative at Worcester? A. The Treasury Representative at Worcester administers local treasury and accounting activities for the electric companies and the gas companies in Central and Western Massachusetts. The companies under his jurisdiction for treasury and accounting matters are Worcester County Electric Company, Northampton Electric Lighting Company, Northern Berkshire Electric Company, Southern Berkshire Power & Electric Company, Central Massachusetts Gas Company, Northampton Gas Light Company, and Wachusett Gas Company. The Treasury Representative is an Assistant Treasurer of each of these companies.

Q. How do these companies compare in size? A. Worcester County Electric with approximately 205,000 customers far overshadows the rest of the companies in this district. Worcester has 85 per cent of the total electric customers and 77 per cent of total customers including both gas and electric. Northern Berkshire Electric Company is the next largest company with over 16,000 customers, with North-[1102]ampton Electric Lighting Company being next largest with over 9,500 customers. Southern Berkshire is the smallest of the electric companies with approximately 8,000 customers.

Q. What about the gas companies? A. These companies

are very nearly the same size. The largest company is Central Massachusetts with over 9,500 customers, while Northampton and Wachusett each have about 8,000 customers. Other measures for size such as total plant investment and number of employees reflect similar results.

Q. Will you tell us something about the Treasury Representative's principal assistants? A. A staff assistant is the Auditor who is located at Worcester and who is responsible for local internal controls, procedures and special studies for all of these companies. An Accountant and Audit Clerk perform detailed duties for the Auditor.

Q. How does the Auditor function? A. The Auditor is in the field frequently, traveling among the companies in order to keep the Treasury Representative well informed as to how accounting procedures and policies are being implemented in the various field locations. He is usually in close personal contact with the central organization in Boston, including those on the internal audit staff and the systems and methods group. He is usually immediately informed [1103] of all items of importance to any system company for investigation in his own companies, and is able to pass on items of importance to the central organization.

Q. Does the Auditor assist in other ways than you have just described? A. Yes, he is usually a member of the various treasury and accounting committees establishing procedures and standards. As examples, we presently have two very active committees. One of these is in the Forms and Procedures Committee where existing and proposed forms and existing and proposed procedures are under regular review. Another committee is the Electronics Committee, which I mentioned before, where existing machine accounting functions are reviewed and feasibility studies are made concerning new programs. By drawing together these talented and experienced people from various parts

of the gas and electric system, we are able to put together specialized study groups that are highly productive at a minimum cost.

Q. Does the Auditor at Worcester have supervision over any of the local treasury and accounting activities? A. No, his responsibilities are staff only.

Q. Who is next in line after the Treasury Representative? A. With respect to the local treasury and accounting activities, a Comptroller located at Worcester has charge of the general accounting, customer accounting and stores accounting activities for Worcester County Electric Company, Central Massachusetts [1104] Gas company, Wachusett Gas Company, Northampton Gas Light Company, Northampton Electric Lighting Company, Northern Berkshire Electric Company and Southern Berkshire Power & Electric Company.

Q. Would you state briefly how the Comptroller performs his supervisory function? A. Most day to day matters are handled by the Comptroller and his staff in accordance with established treasury and accounting procedures and the requirements of regulatory authorities. Any required interpretation of established procedures would, of course, be the decision of the Treasury Representative who in turn would contact me if necessary in order to insure uniform System operation.

Q. Considering the Worcester, Central and Wachusett areas, would you describe the treasury and accounting functions coming under the Comptroller of these companies? A. We have two principal locations in the Worcester area where general accounting functions are performed. For the Worcester Company, general accounting personnel and plant accounting personnel are located at the Southbridge Street office in Worcester. For Central and Wachusett, the general accounting, including plant accounting and

payroll, is performed by an all gas group located at Webster.

Q. Are these groups similar? A. The functions performed are similar, but the requirements [1105] of the accounting function is dependent upon the size of the companies, the character of the territory served and other operational patterns.

The Worcester Company's plant investment approximates 88-1/4 million dollars at 12/31/59 whereas the combined total of plant for Central and Wachusett was five million dollars. In addition there are many more units of electric plant and for that reason the plant accounting activity for the former will require more clerical and supervisory help than that of the latter two.

Q. Are there other differences? A. This same size differential will be reflected in other general accounting activities such as the preparation and posting of vouchers, entries to subsidiary and general ledgers, accounting work relative to payroll and many other routine activities.

Q. What is the number of employees engaged in the general accounting function at these two areas? A. Including supervision, there are 36 employees at Worcester, and six employees at Webster, including a Chief Clerk, who reports directly to the Comptroller at Worcester.

Q. Would you describe the general accounting function in the companies in Western Massachusetts? A. The function is similar to that which I have just described for Worcester area in that it includes payroll and [1106] plant accounting along with maintaining the general books of accounts for the four companies in this area.

Q. Where is this function performed? A. Along with all other local treasury and accounting functions, the general accounting for Northern Berkshire, the largest of these companies in terms of revenue, plant investment and meters in service, is located at the office building in North Adams.

Southern Berkshire's accounting functions are performed at its office in Great Barrington and the accounting for Northampton Gas Light Company and Northampton Electric Lighting Company is performed on a combination basis by personnel located at the office building in Northampton.

Q. Are similar numbers of employees engaged in general accounting functions at each of these locations?

A. Northern Berkshire, with meters and revenue approximately twice that of Southern Berkshire, utilizes nine employees in handling its general accounting activities. Southern Berkshire has four employees engaged in this function. In Northampton, where the combined gas and electric revenues, plant investment and meters in service for both companies approximates in numbers that of Northern Berkshire, we have ten employees engaged in performing on a combination basis, the general accounting function for these two companies.

Q. Are the general accounting operations performed in a similar manner at all locations in both Central and Western [1107] Massachusetts? A. Generally speaking, yes. All areas utilize a manual operation. Entries from source documents are all hand-posted to the various books of account and reports with no punched card or electronic data processing equipment used in any of these areas.

Q. Would you discuss the customer accounting function as it appears in all of these companies? A. Under the supervision of the Superintendent of Customer Accounting, located at Worcester, the customer accounting activities are performed on a joint basis among Worcester, Central and Wachusett. All of the addressograph work, the billing and most of the preparation work for the bills is performed in the Worcester office. The billing itself is performed on key driven equipment at Worcester. The customer accounting personnel at Worcester, as well as at several

outlying locations, perform this function for both gas and electric customers.

Q. And in the Western area? A. The pattern follows that outlined for general accounting with the customer accounting for Northern Berkshire and Southern Berkshire being located at each of the offices of those companies, and a combination customers accounting function being located at Northampton for Northampton Gas and Northampton Electric.

[1108] Q. Is the size of these various customer accounting groups in the same proportion to company size as was the general accounting function? A. In the straight electric operations such as Northern Berkshire and Southern Berkshire, the size of the customer accounting group would bear the same relationship to over-all company size as did the general accounting group. However, in the combination area this is not quite true. For example, the Northampton Gas and Northampton Electric operations, when measured on a combined basis, approximately equals in size the straight electric operation of Northern Berkshire. In the general accounting function the number of employees engaged in this function at Northampton and at Northern Berkshire is approximately equal. In the customer accounting function, however, where the combined total of meters in service for Northampton Gas and Northampton Electric is about 17,700 and the total meters in service for Northern Berkshire is about 16,600, we find that in Northern Berkshire we require 18 employees in the customer accounting function whereas the combined function at Northampton requires but 11 employees.

Q. And the reason for this? A. The same reason that I have referred to before—that our greatest saving in a combined operation is in the customer contact functions such as meter reading, billing, and collections.

Q. Returning to the area around Worcester, I believe in [1109] your general statement on Worcester customer accounting you mentioned several outlying locations where this function was performed for both gas and electric customers. Would you explain that further? A. There are four locations, each with a supervisor, where customer accounting functions are performed for both gas and electric customers. One of these is located at Clinton where 17 employees handle certain customer accounting functions for 28,000 meters of Wachusett Gas Company and Worcester County Electric Company, of which approximately 8,000 are gas meters in a combination territory.

Q. Why do you say certain of the customer accounting functions? A. The functions at the outlying office which I am describing are exclusive of the actual bill preparation done at Worcester.

Q. Would you continue your description of the outlying combination customer accounting offices? A. The remaining three outlying combination offices are located in the territory of Central Massachusetts Gas Company and Worcester County Electric Company. There is one office at Southbridge, one located at Spencer and one at Webster.

Q. Are there any other combination offices in the Worcester-Wachusett territory? A. Yes, there is an office in Leominster where seven [1110] employees under an Assistant Supervisor who reports to the Supervisor at Clinton perform cashiering, customer service and meter reading functions for 8,900 electric and 5,200 gas customers.

Q. Where would the customer accounting function be handled for these accounts? A. This is handled out of the previously described Clinton office.

Q. How many accounts in total would the joint offices located in Southbridge, Webster and Spencer handle? A. In total, these three offices handle approximately 33,600 meters including about 8,500 gas meters in combination

service areas. The total personnel engaged in the customer accounting function at the three locations totals 31.

Q. Are there any other outlying areas where customer accounting functions are performed in the Worcester area?
A. Not in a combination territory but we do have six locations representing approximately 96,000 straight electric accounts where we perform certain customer accounting functions.

Q. And these are? A. These are located at Franklin, Gardner, Marlboro, Palmer, Milford and Uxbridge; and in total 83 employees, including supervision, are employed in the performance of this function at these locations.

Q. Is the complete accounting function for customers [1111] performed at these locations? A. No, it is similar to the areas that I outlined in the combination territory where bill preparation is performed in Worcester, and the balance of the customer accounting functions are performed in the outlying offices. The functions in the outlying offices are more of a customer contact nature such as meter reading, inquiry, collection, in addition to the bookkeeping.

Q. Any other offices in this territory? A. Not where any bookkeeping is done but we do have several small offices where customer contact work for electric customers of Worcester is performed.

Q. Would you tell us a bit about the customer accounting function at the Worcester office? A. In addition to performing the addressograph work, billing and much of the preparation for the entire area in the central part of Massachusetts, this group takes care of the entire customer accounting function for approximately 65,000 customers of the Worcester County Electric Company. This is the largest single piece of Worcester County's approximately 205,000 customers located in 77 cities and towns.

Q. This must be a sizable group engaged in this function.
A. Yes, including supervision, we have fifty-nine employees

in the customer accounting section located at the Worcester office.

[1112] Q. Has any of the customer accounting function in either the Worcester area or the Western Massachusetts area been mechanized? A. If you mean, do we use punch card equipment, the answer is no. The bills themselves are prepared on key driven equipment at the billing locations and all other functions such as posting of cash, cycle balancing, and other bookkeeping entries are performed by hand.

Q. Would you explain the stores and stores accounting operations in the Worcester area? A. This group is responsible for the handling and accounting for general material and supplies, appliances and appliance repair parts. Stockrooms are located in Worcester and also in outlying locations near the production and distribution locations.

Q. Where are the outlying locations? A. Combination gas and electric stockrooms are located at Clinton, Leominster, Webster, Spencer and Southbridge. Those at Clinton and Spencer are unattended. Worcester County Electric Company additionally maintains as a part of its electric operations several stockrooms and substokrooms throughout the area. These are of both the attended and unattended class.

Q. How is this widespread stores operation controlled? A. Over-all control of the stores activities is placed [1113] in a Stores Superintendent who is located at Worcester. He has seven storekeepers reporting to him from the various field locations.

Q. How is this function handled in the Western area? A. Northern Berkshire has its own stockroom under the supervision of a storekeeper and two clerks located at North Adams. Southern Berkshire stores activity is located at Great Barrington and is carried on by one storekeeper and

a stockman. These stockrooms are for the electric business only.

Q. And in the combination territory at Northampton? A. A storekeeper with three clerks carries on the combination gas and electric operation at Northampton.

Q. Is there any other operation in either the Central or the Western area that comes within the framework of the local treasury and accounting organization? A. Yes, we have one other group of six persons located at the Worcester office which handles the local insurance, medical and safety activities for all seven companies in the Central and Western areas. This group includes an insurance and medical supervisor, his assistant, a safety supervisor a nurse and secretarial and clerical employees.

Q. Does this last group report to the Comptroller in Worcester? A. Yes, their responsibility is through the Comptroller to the Treasury Representative at Worcester. However, I would [1114] like to point out that because of the nature of this particular function, the group supervisors involved are in almost daily contact with their counterparts in Boston in the central organization and local management.

Q. Now have you completed the area of responsibility for the Treasury Representative located at Worcester? A. Yes, I have.

Q. Then what about the Treasury Representative at Lawrence? A. The Treasury Representative located at Lawrence administers local treasury and accounting activities for Merrimack-Essex Electric Company, Lawrence Gas Company and North Shore Gas Company. He is an Assistant Treasurer of each of these companies.

Q. Does he have a staff group? A. Yes, he is similar to the Treasury Representative at Worcester in that he has on his staff an experienced Auditor who is responsible for local internal controls, procedures and special studies

for these companies. This auditor performs the same staff functions as well for Mystic Valley Gas Company and Suburban Electric Company under the administration of the Treasury Representative at Malden.

Q. How do the companies within the Lawrence area compare to each other as to size? A. We have something of the same situation as that which exists in the Worcester area. Expressed in terms of [1115] over-all revenue and plant investment, Merrimack represents more than 80 per cent of the entire area. Its approximately 166,000 customers are more than 70 per cent of the total customers, gas and electric, in the area.

Q. And the gas companies? A. Lawrence and North Shore are very nearly of the same size. Each has approximately 33,000 gas customers. However, all of Lawrence's Gas customers are in the combination territory with Merrimack-Essex Electric Company, whereas North Shore serves 9,000 of its 33,000 gas customers in the municipalities of Peabody and Danvers where electric service is provided by municipal plants.

Q. How are the overall day to day accounting activities handled in the Lawrence area? A. As in Worcester, the Treasury Representative is assisted by a Comptroller located in the Lawrence office who is next in line of authority and who has immediate supervision over local treasury and accounting personnel.

Q. Would you describe the general accounting activities in their area? A. All general accounting activities are centered at the main office in Lawrence under a Chief Accountant. The general accounting group numbers 32 people and they maintain the general accounting records, prepare reports, and so forth, for the three companies. Specialized functions such as preparation of cash and operating estimates, financial studies and similar matters are performed on a [1116] combination basis.

Q. What other groups are included? A. A payroll group of 14 and a plant accounting group numbering 17, each of which includes clerks on the gas company payrolls, perform these functions for the three companies on a combination basis. Additionally, there is an insurance supervisor, with secretarial and clerical help, performing local insurance functions on a combination basis for the three companies.

Q. Is there any electronic equipment utilized in the performance of the functions that you have mentioned? A. No, the general accounting, plant accounting, payroll and insurance functions in this area are a manual system.

Q. Would you describe the customer accounting activities of this area? A. All gas and electric customer accounting activities are under the supervision of a Chief Accountant-Commercial, who is based at the Lowell office and who generally supervises all customer accounting activities for Merrimack, Lawrence and North Shore. We have customer accounting groups in this area based at Lowell, Haverhill, Lawrence, Salem and Gloucester. The last three of these groups are engaged in combination gas and electric functions; with those located at Lawrence being concerned with such activity for Merrimack and Lawrence in the Lawrence area and those at Salem and Gloucester being [1117] engaged in combination gas and electric functions; with those located at Lawrence being concerned with such activity for Merrimack and Lawrence in the Lawrence area and those at Salem and Gloucester being engaged in combination activities for Merrimack and North Shore. In addition there are several small customer contact offices.

Q. Are there any significant characteristics of the operations of these groups? A. With the exception of the Salem-Gloucester area, the operation is a standard key driven customer billing and accounting function similar to that

which I explained in the Worcester area. The customer billing function at Salem and Gloucester for gas and electric customers of Merrimack and North Shore is performed on electronic accounting machines located at the Malden office of Suburban and Mystic.

Q. What is the reason for this? A. In September 1954, in order to effect large savings in meter reading and customer billing costs, New England Electric System placed all of its then Massachusetts gas companies and electric companies on a bi-monthly reading and billing basis. This, of course, meant a sizable reduction in the billing load at the Malden Billing center. So that we would not lose the economies of volume that we had already won in the machine room (economies made possible by the combined size of the Malden joint customer billing operation which I expect to [1118] explain later) we immediately reached out for the customer billing of North Shore and the Salem-Beverly-Gloucester area of Merrimack. This billing was then being done on key driven equipment at the billing centers in Salem, Beverly and Gloucester. The Salem-Beverly-Gloucester area was nearby geographically and in size presented a good load which enabled us to continue the same scale of operation in the Malden machine accounting room, thereby making continued use of trained personnel, highly developed procedures and more sophisticated equipment.

Q. Would you describe the other combination area which I believe you said was Lawrence?

Hearing Officer Ewell: May I interrupt to ask one question? What do you mean by key-driven equipment?

The Witness: Such as a Burrough's machine or National Cash Register. It has a key board rather than a punch card operation.

Hearing Officer Ewell: Not just a typewriter?

The Witness: No.

By Mr. Dunn:

Q. (Repeat) Would you describe the other combination are which I believe you said was Lawrence? A. We have approximately 33,300 customers of Lawrence Gas Company and 44,800 customers of Merrimack handled through the customer accounting function in this office. Bills are [1119] prepared on key driven equipment. The bookkeeping for customers accounts is on unit desks which, in Lawrence, average something in excess of 9,000 meters per desk and the operators handle the usual functions of posting cash, balancing accounts and recording the in-and-out movement of customers.

Q. What other functions are on a combination basis? A. Part of the customer accounting function at Lawrence is represented by a credit and collections sub-division which utilizes a combination customer history card stored in heavy fire-proof safes. It provides a clear picture of the combination credit history of each of our customers. In effect, it gives us a two-way check which would not otherwise be available to us, for we are able to check each customer's habits on each account. Of course, the meter reading and customer relations activities are also performed on a combination basis within the framework of the Lawrence customer accounting group.

Q. Are there any other functions coming under treasury and accounting responsibility in this area? A. In Lawrence, located on Methuen Street, a short distance from the main office, we have the customer service record center under the supervision of the Supervisor of Customer Accounts. This is a combination Gas and electric customer service record maintained for the approximately 33,000 customers of Lawrence Gas and the 44,000 customers of Merrimack in the Lawrence area.

[1120] Q. What is the advantage of this type of operation? A. To the companies there is the obvious advantage

of saving the expense of a duplicate record plus having comparative information about the same customer in one spot. To the customer, we provide the advantage of being able to make one call to either order "in" both services or order "out" both services, or to make inquiries regarding both services.

Q. Would you express the size of the Lawrence customer accounting function in terms of personnel? A. The customer accounting record center which I just described is operated by five people including the supervisor, our customer relations activity, including credit and meter reading, is handled by twenty-one people and the billing and accounting is performed by thirty-nine clerks. A supervisor and his assistant supervise the entire operation.

Q. Would you just briefly mention the other areas of customer accounting? A. I have already described the customer billing function in the Merrimack-North Shore Gas combination territory which is handled from the Salem and Gloucester offices and utilizes punch card equipment at Malden. All other customer accounting functions in Salem and Gloucester are performed similarly to those just described in the Lawrence area, except that the customer service record is under the supervision of the Distribution Superintendent.

[1121] Q. What is the size of the Salem-Gloucester operation? A. We have customer accounting functions performed at the Salem office by fifty employees including a Supervisor. This includes three branch stores; one each located in Danvers and Peabody, both straight gas territories, where cashiering and sales activities are performed, and a branch office of the Salem area located at 223 Cabot Street in downtown Beverly. A joint operation with Merrimack and North Shore is conducted in this office consisting of cashiering, customer relations and some appliance display.

Q. How many customers are handled from the Salem office? A. Merrimack has approximately 29,000 electric customers in this territory with North Shore Gas Serving 27,300.

Q. And from the Gloucester office? A. The ratio of gas accounts handled to electric is somewhat different in the Gloucester area. There are approximately 6,000 gas accounts and over 14,000 electric accounts in this area.

Q. What is the relative size in numbers of personnel at Salem and Gloucester? A. The Salem office is approximately double that of Gloucester, where there are twenty-four employees engaged in the combination customer accounting function, including a Supervisor.

Q. What other areas are under the supervision of the [1122] Chief Accountant-Commercial located in Lowell? A. The only areas not yet described are the electric operations in Lowell and Haverhill. Lowell has almost 50,000 meters in service, with forty-five employees at this location responsible for meter-reading, customer billings and accounting, credit and collection and customer relation activities. In the Haverhill office, we have thirty-nine employees, including a Chief Clerk and Supervisor of Customer Accounts, who perform the same functions described in the Lowell area for the approximately 30,000 customers of Merrimack in the Haverhill location. This includes branch office operation at Amesbury and Newburyport.

Q. Would you tell us something about the stores and stores accounting function of these companies? A. There is a Superintendent of Stores located in Lowell, responsible for stores activities for Merrimack and Lawrence, including a joint stores group at Lawrence. In addition, we have a stockroom located at Beverly which supplies only the gas operation of North Shore in the Salem-Gloucester district. This latter stockroom is under the su-

pervision of a Storekeeper who reports directly to the Chief Accountant in Lawrence.

Q. Would you briefly describe the various locations? A. The Methuen Street stockroom in Lawrence provides storage of general stock and records maintenance for both the [1123] gas and electric stock of Merrimack and Lawrence. There are nine employees engaged in the stores operation, including a Storekeeper and his assistant.

Q. You mentioned several electric stockrooms? A. Yes, in addition to the combination stockroom in Lawrence, Merrimack has six other stockrooms located at Salem, Beverly, Gloucester, Haverhill, Amesbury and Lowell, all under the supervision of the Superintendent of Stores in Lowell. He is assisted by Storekeepers in most of the locations; and the over-all personnel involved in the electric stockrooms total thirty employees including supervision.

Q. And now would you describe the North Shore Gas stockroom? A. The stockroom located on River Street, Beverly, serves the entire North Shore Gas area. All material and supplies, including general and merchandise stock, are located here. A Storekeeper and his assistant, with three clerks, make up the personnel handling this operation.

Q. Are there any other stores activities in this area that you have not described? A. No, this completes the stores function here.

Q. What other treasury and accounting activities are there in the Lawrence area? A. There are certain insurance matters included in the Treasury and Accounting activities in this area.

[1124] Q. Would you describe them, please? A. There are an Insurance Supervisor, an Assistant, a Secretary who handles all local insurance matters for Merrimack, Lawrence and North Shore. These people are presently

located at Lowell reporting to the Chief Accountant at Lawrence.

Q. Would you now describe the Treasury Representative at Malden? A. The Treasury Representative located at Malden is in the main office building there which is also headquarters for both the regional electric management executive for Suburban and Lynn Electric Company and headquarters of the G. Division, besides being the principal office for Suburban and Mystic Valley. The Treasury Representative here administers all local treasury and accounting activities for Mystic Valley Gas Company and Suburban Electric Company, and he is an Assistant Treasurer of each of these companies.

Q. When you described the Lawrence area you mentioned a tie-in between the Auditor there and these companies? A. Yes. The Auditor located in Malden is the same man that I described in the Lawrence area. He is responsible to the Treasury Representative of Suburban and Mystic in the same way that he reports to the Treasury Representative in Lawrence.

Q. Would you describe generally the local treasury and accounting activities at Malden? [1125] A. In Malden we have the most highly centralized and integrated operation in the retail treasury and accounting organization among the five areas in Massachusetts. The area itself is closely knit, and after the corporate mergers in 1953 we were quite successful over the next few years in consolidating the various treasury and accounting functions by bringing them into the main office in Malden.

Probably the major contributing factor to our ability to accomplish this was the installation in 1952 of an electric accounting machine department in the Malden office. This covered certain general accounting and customer accounting activities for the two Malden companies but it was, of course, planned and geared to accept the same

activities for the present Suburban and Mystic after the mergers in 1953. I expect to discuss this department in more detail later on.

Q. Please explain the present treasury and accounting functions in the Malden area? A. As in other areas, a Comptroller, who is next in line of authority to the Treasury Representative, supervises the day to day matters in accordance with established treasury and accounting procedures. The Comptroller is assisted in the many details of the supervision of his organization by a Chief Accountant, through whom all treasury and accounting functions are channeled.

Q. Would you give us some idea of the relative size of [1126] Mystic and Suburban? A. With regard to plant investment, the companies are almost equal, each having approximately \$25,000,000 invested in plant. Suburban has just over 80,000 electric customers, of which approximately 67,000 are in the combination territory with Mystic while Mystic's gas customers number about 99,000. Even though it has fewer customers, Suburban has several very large industrial accounts and therefore its annual gross operating revenue approximates eleven and one-half million dollars, whereas Mystic's revenue in 1958 was approximately nine million, four hundred thousand dollars.

Q. Before discussion of the various treasury and accounting functions in this area further, would you explain the electric accounting machine installation at Malden? A. Our Machine Accounting Department at Malden touches all phases of treasury and accounting functions. Because of its ability to handle volume efficiently, the application of the machine accounting to the joint gas and electric treasury operations is ideal. Mystic and Suburban are, of course, separate corporate entities and we must maintain separate sets of books and render separate bills to customers and so forth, but even though these processes

of bill printing, revenue summary and the listing of ledgers are done separately for each corporation the forms and procedures are common so that machines can be set up to process an operation for each company [1127] with the only change being that of inserting the proper form with the right corporate name. The already established machine wiring and the mechanical operation need not change.

Q. Could you give some idea of the general size of the Machine Accounting Department in Malden? A. Machine-wise there is one electronic calculator, and in addition, we have four electric accounting machines or tabulators and the usual punches, sorters and collators. The present organization, including three people who do clerical work in the machine room, is made up of eighteen employees including a supervisor and his assistant.

Q. Would you briefly mention how this operation touches the other general accounting functions? A. The complete general and subsidiary ledger and other subsidiary records are prepared on the machines for the general accounting group. For the stores accounting function, unit pricing of stock and inventory dollar balances are developed on machines. For the customer billing and accounting function, the actual billing is done on the tabulating machines for all 80,000 customers of Suburban, 99,000 customers of Mystic, 33,000 customers of North Shore and 44,000 of Merrimack's customers on a bi-Monthly basis.

Q. What about payroll? A. With the exception of a small executive monthly payroll, all weekly employees of both Mystic and Suburban are paid [1128] by checks prepared in the machine accounting department. In addition to preparing actual checks, the payroll accounting function is also handled on punch card equipment.

Q. Other than for treasury and accounting functions, is the machine room called upon for any other information?

A. It certainly is. Because so many basic records have been recorded in a usable form in this department, it is constantly supplying special studies and reports to all other gas and electric departments and to both gas and electric management groups. For instance, two critical areas that management is always interested in are employee lost time and employee over-time. With the basic payroll information in the machine room, it is able to supply a continuing comparative report to management and to its department heads reflecting these two items of cost. With regard to customer service rates, we are able to supply gas and electric rate frequency studies in a most economical fashion. The operation of gas and electric vehicles can be analyzed on a comparative basis through information that we have from automobile time reports. With our complete name and address files we are able to perform many jobs for the merchandise sales and new business groups.

Q. Returning to the local treasury and accounting functions, would you please explain the general accounting function in this area? [1129] A. The supervisors of the general accounting, plant accounting and payroll and insurance operations have jurisdiction over the original entries and books of account and other related documents for both the Mystic Valley Gas Company and the Suburban Electric Company. Including supervision, there are thirty-six people involved in these operations including personnel on the payroll of the gas company.

Q. Would you describe the customer accounting function at Malden? A. All of the customer accounting function, including the billing of accounts, the reading of meters, the cashiering, and the handling of credit and collections is headquartered in the Malden office. A Commercial Office Manager located in Malden supervises the over-all gas and electric operation and has immediate assistance

from a staff of five people including a Chief Clerk, assistants and stenographic employees.

Q. What are some of the operations that this group supervises? A. A meter reading group made up of twenty-seven employees, including supervision, handles the entire area of Mystic and Suburban. We deliver customers' bills in all of our combination territory and this operation is part of the responsibility of the meter reading group.

Q. What about customer billing and accounting? A. A supervisor of Customer Accounts is in charge of fifty-eight employees engaged in this function for the approximately [1130] 80,000 customers of Suburban and 99,000 customers of Mystic.

Q. Please explain this operation? A. After reading, the meter books are prepared in the customer accounting section prior to the actual billing operation which takes place in the Machine Accounting Department. Again, as in most of our companies, the customers accounting is done by a unit desk method and after being calculated and printed in the machine accounting room the bills themselves are returned to the unit desk for certain operations before mailing.

Q. You have mentioned unit desk before. Would you please explain what this means? A. Briefly, a unit desk operator has available for processing in one location all the information concerning a group of customers. In the Malden office for example, the average unit desk covering the combination territory would handle the gas and electric accounts for a number of meters in excess of 8,000. On a cycle basis, the unit desk operator does the necessary bookkeeping for these accounts and develops balances.

This includes the posting of cash and making of necessary adjustments. Additionally, each one of the unit desk operators in Malden is able to be contacted directly by customers through telephone. While we have a customers

relations [1131] department for specific complaints, we try to have the girls on the unit desks answer the general information calls from the customers which will cover such items as "When will my meter be read", "Did I pay last month's bill", "How much do I owe on my electric account", or "How much do I owe on my gas account" and "How did you figure my bill".

Q. What are customer benefits here? A. As you can see, the answers to a variety of problems can be had with one call. When the operation is on a combination basis the customer is able to make one call and get all the answers for both accounts. This is one of the many customer advantages to combination operation in the customer accounting function.

Q. Would you now tell us something about the credit and collections operation? A. The cashiering operation is supervised by a Head Teller located in Malden, who has under his jurisdiction five Cashiers in the main Malden office and thirteen Cashiers in branch store locations, including five branch stores which are in all gas territory and five which are jointly occupied with Suburban. The Credit Manager, Credit Supervisor and a Supervisor of Customer Relations head up the balance of the credit and collections operation.

Q. Is this a combination operation? A. Yes, it is and as in Lawrence, a combination customer [1132] credit history record card is maintained in this department. Exclusive of the Cashiering operation which I described, there are twenty-four people involved in the customer relations and credit and collection end of this function.

Q. I know you touched on the stores accounting operation in describing the effects of the merger, but would you please review that function briefly? A. The electric stores operation and the gas stores operation are physically separated from each other and are run as entirely

separate operations. However, the storekeepers of each operation do report to the common supervision of the Chief Accountant of both companies. Additionally, certain records for each and the unit pricing of general stock is handled in the combination Machine Accounting Department.

Q. How many people are we talking about here? A. The electric stockroom consists of a Storekeeper and his assistant and eight other employees, and the gas stockroom has a Storekeeper, an assistant and 11 other employees.

Q. Would you now tell us about the Treasury Representative in the Southeastern District? A. The Treasury Representative of the Southeastern District is responsible for local treasury and accounting functions for the Norwood Gas Company, Quincy Electric Company and Weymouth Light and Power Company. He is located at the main office in Quincy which is also the headquarters of the [1133] regional electric management executive for Quincy and Weymouth and the principal office of the Quincy Electric Company. He is also an Assistant Treasurer of each of these companies.

Q. Are Quincy, Weymouth and Norwood similar in size? A. Quincy and Weymouth are not too far apart in size, with Quincy having approximately 29,000 meters in service and Weymouth over 21,000. Quincy has plant investment of about \$7,300,000 and Weymouth about \$8,000,000. Norwood, however, is considerably smaller than either of the two electric companies. It has about 4,700 meters in service and its plant investment accounts are slightly under one and one-half million dollars.

Q. Would you further describe the Treasury organization at Quincy? A. The Treasury Representative at Quincy is assisted by a staff Accountant who devotes his time to special studies and projects for the district companies. There is also an insurance clerk and safety supervisor

reporting to the Treasury Representative, who handles all local insurance matters and also handles all safety activities of the district companies. Rounding out the staff of this Treasury Representative is a Chief Accountant, who is next in line of authority to the Treasury Representative, also located at Quincy, who serves as the chief accounting supervisor for general accounting, customer accounting, and stores accounting and machine accounting personnel of the Southeastern District.

[1134] Q. Would you describe Norwood's general accounting group? A. Very little general accounting work is actually done at the Norwood office. The Chief Clerk in Quincy and some of the clerks of the Quincy general accounting group are engaged in keeping the general books and accounts of Norwood and in the preparation of monthly financial statements, reports to State and Federal regulatory authorities, estimates and other assignments for Norwood, as well as performing similar work for Quincy.

Q. Is any general accounting work performed at the Norwood office? A. Yes, there is an Accountant located at Norwood, who in addition to performing necessary supervision over other accounting personnel located there, is responsible for the preparation of vouchers, quarterly reports for Federal and State taxes, and the plant accounting functions through maintenance of the unfinished construction ledger.

Q. What about Quincy's general accounting? A. In addition to the Chief Clerk in charge of the general accounting function at Quincy, there are eight other persons engaged in this operation, including payroll and plant.

Q. What about Weymouth's general accounting? A. There is a Chief Accountant in Weymouth who has general supervision over all general accounting, customer accounting [1135] and stores activities. He is also responsible for certain detail work such as the preparation of cash and

operating estimates and special reports. An Accounting Assistant has direct supervision of the general accounting function at Weymouth, and there are five clerks under the supervision of this Accounting Assistant who takes care of the various general accounting, payroll and plant accounting functions for Weymouth.

Q. Did you say that there was a Machine Accounting Department in Quincy? A. Yes. The Machine Accounting Department located at Quincy performs general accounting functions including payroll and plant accounting and customer billings and accounting functions for both Quincy and Weymouth. Additionally, it performs certain general accounting functions for Norwood but it does not handle any customer billing and accounting for that company.

Q. How large a department is the Machine Accounting group in Quincy? A. Including a Machine Room Supervisor, there are 7 employees engaged in this function at Quincy.

Q. Would you describe the customer billing and accounting function in the southeastern District? A. In Norwood, there are six customer accounting employees under the supervision of the Accountant previously described in the general accounting, who are engaged in the customer billing, [1136] accounting, credit and collections and meter reading for the approximately 4500 gas customers of Norwood.

Q. Is any of this work done in the Machine Accounting Department at Quincy? A. No, this work is entirely self-contained at Norwood and the billing is performed on key driven equipment with all other functions being of a manual nature.

Q. Would you now describe Quincy's customer accounting? A. The customer billing and accounting itself is performed pretty much on the punch card equipment at Quincy. Under the supervision of a Commercial Office

Manager and his assistant, there are twenty-seven employees handling all the other phases of this activity such as credits, collections and meter reading and the service order work.

Q. Now the Weymouth Company's customer accounting? A. Again, most of this is performed on the punch card equipment located at Quiney. However, there are twenty other employees under a customer accounting working supervisor who perform the various other functions in the customer contact field for Weymouth.

Q. Would you briefly touch on the stores activities in this area? A. Norwood has only an unattended stockroom. The necessary stores accounting work is done by one of the clerks located at Norwood. Quiney and Weymouth each have a Stores operation [1137] under the supervision of Working Foreman.

Q. Would you now describe the treasury and accounting for the Lynn area? A. Local treasury and accounting for the Lynn Gas Company and the Lynn Electric Company are under the supervision of the Treasury Representative at Lynn, who also serves as Treasurer of these companies. The treasury and accounting organization under his supervision is responsible for all general accounting, including plant and payroll, customer accounting and stores accounting.

Q. Please tell us something about the size of each of these companies? A. Lynn Electric Company has over 45,000 customers, plant investment accounts totaling over twenty-one million dollars and annual revenue that approximates seven million dollars. Lynn Gas Company has about 41,000 customers with gross annual revenue of a little less than four million dollars and its plant investment accounts total approximately nine million dollars.

Q. Who is on the staff of the Treasury Representative at Lynn? A. The Treasury Representative at Lynn has a

staff assistant, a secretary, and an Assistant Treasurer who is responsible for the day to day supervision of all treasury and accounting functions for the Lynn Gas Company and the Lynn Electric Company.

Q. Would you please describe the treasury and accounting as they exist in the Lynn Companies? A. I would like to preface my remarks by saying that the Treasury and accounting organization at Lynn differs in some respects from the other districts. Due to the recent [1138] acquisition of the Company by NEES, Lynn's treasury and accounting activities have not yet been fully integrated into the NEES system.

Q. You do have combination treasury and accounting functions at Lynn? A. Yes, we do, almost all functions of treasury and accounting are performed on a combination basis in these companies.

Q. Please explain the general accounting function at Lynn? A. A group of seventeen people located in the main office on Exchange Street, Lynn, perform the general accounting functions for both Lynn Gas Company and Lynn Electric Company. This includes some part of the payroll accounting and some part of plant accounting. There is another group also located at the main office that performs the function of preparing the payroll on key driven equipment as well as running the necessary duplicating equipment and operating the mail room. This group is under a common payroll department and mail room supervisor. Additionally, and located at the plant on the Lynnway, Lynn, is a group that performs certain stores accounting functions and plant accounting functions under a Supervisor of Works Accounting.

Q. How many employees are engaged in the accounting functions at the last two locations? [1139] A. Including the supervisor, we have eleven employees in the payroll and mail room operation and at the Lynnway location, there

are eleven employees also including the supervisor, engaged in the stores accounting and plant accounting functions.

Q. Is the key driven payroll operation that you mentioned the only mechanized part of the general accounting function? A. Yes, that is correct. The rest of the general accounting is on a manual basis. However, we do have punch card equipment at Lynn, but it is used in the customer accounting only.

Q. Would you please describe the customer accounting at Lynn? A. The customer accounting group at Lynn is responsible for all necessary routines involved in the preparation and mailing of customers' bills, handling orders for connecting and disconnecting customers, maintenance of meter records and the other necessary duties with respect to recording the receipt and payment of bills by customers. As I mentioned before, the gas and electric bills are prepared with punch card equipment. The necessary cashiering activities are also included in the customer accounting activities at Lynn.

Q. How many employees are involved in the operations you have just described? A. Reporting to the Supervisor of Customer Accounts, there are forty employees engaged in the billing and accounting [1140] and cashiering operations. Additionally, we have a Chief Clerk located at the Marblehead branch office of the Lynn Gas Company who also reports directly to the Assistant Treasurer.

Q. What about other customer accounting work? A. A Credit and Collections Department headed by a Credit Manager and his assistant handles the customer contact operation with regard to credit, collections, and customer complaint problems. Including supervision, there are eighteen employees performing these duties. The meter reading group consists of two supervisors and eleven readers who

perform reading on a combination basis for the two companies.

Q. Are there any other treasury and accounting activities in this area? A. I mentioned the stores accounting in discussing the general accounting group. The actual handling of stock also is a treasury function in this area with a Chief Storekeeper and his group located on the Lynnway in Lynn at a combination stockroom. This group is responsible for the receiving and shipping of stock, the ordering of necessary material, the maintenance of minimums stock balances and the approving of invoices for payment. The Chief Storekeeper in charge of this group reports directly to the Assistant Treasurer located at the main office in Lynn. Including supervision, there are eight employees engaged in this combination operation.

[1141] Q. Are there any other Treasury Representatives in any other areas of the NEES System? A. There are no other Treasury Representatives located in any area where the NEES System has gas operations. We do have a Treasury Representative located in Providence, Rhode Island, who has charge of the treasury and accounting activities for the Southern District companies of the Narragansett Electric Company in Rhode Island, Attleboro Electric Company in Massachusetts and the Mystic Power Company in Connecticut. There is another Treasury Representative located in Lebanon, New Hampshire, who supervises treasury and accounting activities for Granite State Electric Company. Each of these men is Treasurer of each of the companies in his area except in the case of Attleboro where he is Assistant Treasurer.

Q. Have you now given a general description of all treasury and accounting functions in NEES as they come under your supervision? A. Yes, I believe I have covered them all.

Q. Mr. Lother, is the retail treasury and accounting organization that you have described essentially the way it was at January 1, 1959, the date used in the Ebasco report for comparison of the actual and the Pro Forma organizations? A. Essentially yes, although some organization changes have been made to improve operations.

Q. Would you describe them, please? A. With regard to the Central District Treasury Organizations, [1142] we have eliminated the local district group at Northampton comprised of an Assistant Treasurer, Insurance Clerk, and Safety Supervisor and two Secretaries.

Q. What happened here? A. In a realignment of the over-all organizational pattern, the former Assistant Treasurer at this location was transferred to the Malden office as Comptroller of Suburban and Mystic Valley. The Insurance Clerk and Safety Supervisor formerly employed by the four companies in the Western area was moved to the Worcester office as Assistant to the Insurance and Medical Supervisor, and the two Secretaries involved were absorbed into the Northampton Electric Company through replacement of employees who left the employ of that company.

Q. Did you not have a Comptroller at Suburban and Mystic in the Northeastern District Treasury Organization? A. Yes, we did have a Comptroller there.

Q. Then this move must have affected the Northeastern District Treasury Organization also. A. Yes, it did. To improve administration at Lawrence, we decided to confine the responsibilities of the then Assistant Treasurer of the Northeastern District Treasury Organization to Merrimack, Lawrence and North Shore only. At the same time, the former Comptroller at Mystic and Suburban was given the position and responsibilities of Assistant Treasurer of Mystic and Suburban. The vacancy left by this move was then filled by the former Assistant Treasurer of the [1143]

Western area companies of the Central District Treasury Organization.

Q. This sounds to me like the creation of a new District Treasury Organization and the moving of pieces within the existing district treasury organizations with very little effect on the over-all treasury and accounting costs. Is this correct? A. For the most part, yes. This was an organizational change made to strengthen the over-all pattern. However, we did save the salaries of the two Secretaries as they moved into vacancies without their own jobs being filled.

Mr. Dunn: Mr. Hearing Examiner, I wonder if it would not be a good place to have a brief recess?

Hearing Examiner Ewell: Yes. I would like to ask one question. Where the meter readers perform a joint function I presume they perform two functions on one visit?

The Witness: They do.

Hearing Examiner Ewell: Thank you. We will recess for about 10 minutes.

(Brief recess.)

Hearing Examiner Ewell: All right gentlemen, are you ready?

Mr. Dunn: Yes, sir.

Mr. Nowlin: Yes, we are.

By Mr. Dunn:

Q. Is the rest of the Central District Treasury Organization pretty much as it was at January 1, 1959? A. As I said earlier in my testimony, we are combining office operations wherever possible and working towards an ultimate centralized operation. In line with this, certain customer accounting functions have been centralized in the Central District Treasury Organization when compared to the organization as it existed at the time of the Ebasco study.

Q. Would you describe these briefly, please? A. The

customer billing and accounting function formerly performed at the Leominster office on a combination basis for customers of Worcester and Wachusett, has now been moved to the Clinton office, leaving only the cashiering, customer contact and meter reading functions at Leominster which I described earlier in my testimony. This move resulted in a net saving of one employee. Along the same line we also merged the customer billing and accounting function at the Athol and Winchendon offices into the office at Gardner. With this move we saved two employees.

Q. Have you made any similar moves in functions other than customer accounting? A. Yes. At January 1, 1959 we had nine employees engaged in payroll activities for the Worcester County Electric Company. Since then this entire operation was combined, on a trial basis, with a payroll activity carried out on punch card equipment of the Service Company in the Boston office. We now have but one clerk engaged in payroll activity at Worcester itself to [1145] be sure that the proper flow of information is carried on between Worcester and Boston. The movement of the Worcester payroll into the central office in Boston has taught us much about the problems of timing and communication that a completely centralized accounting operation must face.

Q. Mr. Lother, you have already described the administrative change in the Northeastern District Treasury Organization, have any other changes occurred in the Northeastern District since January 1, 1959? A. No, nothing of a significant nature.

Q. What about the Southeastern District Treasury Organization? A. Again, we have made no changes of a significant nature in this district.

Q. Have important changes occurred in the Lynn District Treasury Organization? A. While certain changes have occurred in the Lynn area, again, the impact on the overall

treasury and accounting function in this area has not been great. On February 5, 1960, effective January 1, 1960, this company separated into Lynn Gas Company and Lynn Electric Company. However, the Treasurer remained the administrative officer for treasury and accounting activities for both companies and the treasury and accounting functions continued to be carried on in a joint fashion as before separation. A more significant event with respect [1146] to treasury and accounting functions occurred sometime prior to separation and subsequent to the Ebaseo study.

Q. Would you describe this, please? A. Prior to its acquisition by NEES, the Lynn Gas and Electric Company had been on a monthly meter reading and billing of service accounts. In line with the NEES System policy of bi-monthly meter reading and billing, plans were made and procedures worked out to place the Lynn Company in this same category. This occurred in the middle of the year 1959.

Q. What was the impact of this on the treasury and accounting activities? A. The shift to bi-monthly meter reading and billing allowed the Lynn Company to make savings of seven meter readers and five customer accounting clerks. These savings were all accomplished within the year 1959.

Q. Have the Lynn Companies been able to maintain these savings? A. For the most part, yes. However, when separation occurred early in 1960, it was necessary to send separate bills for the gas service accounts and the electric service accounts where formerly one bill had sufficed for the combination gas and electric company. This meant additional bill handling work and additional cash posting so that it was necessary to add three clerks to the organization. This partially offset the savings that I had previously mentioned.

[1147] Q. Other than what you have just described, are

there any other significant changes in the personnel of the treasury and accounting activity at Lynn? A. No, there are no other significant changes?

Q. Then does this complete your description of the changes that have occurred in the treasury and accounting operations since the date of the Ebasco reports? A. Yes, I believe I have covered all of the significant changes.

Q. Mr. Lother, throughout your testimony you have described many areas of the retail treasury and accounting organization where employees perform work for two or more companies, will you please tell us how these costs are allocated? A. There are three principal methods of allocation. One method is the use, for billing purposes, of a fixed sum based on a study of the work load involved. Another method is to place the employees on the payrolls as part-time employees of each company for which they perform services. The third is to allocate costs by the payroll-offset method.

Q. Who determines the allocation of costs when joint work is performed? A. The local managers working with the Treasury Representatives determine the allocation of costs among the companies.

Q. Is this matter of allocation a complex and time-consuming [1148] problem? A. No, it is not a time-consuming problem, nor is it very complex. The various local managers, in conjunction with the local Treasury Representative, handle this matter quite easily. Most of the combination work is performed in the various treasury and accounting departments and, therefore, easily measurable in a precise manner. With this information available, a fairly simple conference between the managers with the Treasury Representative in attendance usually resolves allocation problems.

Q. Would you please describe the three principal methods of allocation? A. One of the methods is to have the em-

ployees on the payrolls of each company for whom they perform services. Under this method, the charge to each company can then be on either a fixed percentage allocation, based upon a study of actual work and reviewed periodically to be kept in line, or what we call a time-sheet-basis where an employee enters on his time report the actual number of hours spent for each company. Another method of cost allocation that is used in the various retail companies is the billing of a flat amount to one or more companies by the originating company based upon work studies which are reviewed periodically. A third method that is used is that of the payroll offset where work studies and the application of certain tests reveal that each company in a combination [1149] operation should bear a certain relationship to the overall total, and employees are then placed upon one payroll or the other in order to arrive at the necessary amounts for each company.

Q. Would you please explain in a little more detail the method you described where each employee actually is on the payroll of each company for which he works? A. I believe I broke this into two smaller pieces, one being the method whereby the employee is on the payroll of one or more companies on a fixed percentage allocation subject to review, and the other where he is on the payroll of each company on an actual time-sheet-basis. In the former method, we would use one or more measurements of work load in the treasury and accounting functions such as the number of active meters in service, the plant investment totals of each company or the gross operating revenue. Using these measurements, we would then arrive at a percentage of payroll that each employee or group of employees working on a combination basis should charge to each company for which accounting duties are performed.

Q. Would this allocation last indefinitely? A. No, an allocation of this type is reviewed periodically, and in the

event of any major change within the function where the allocation is used, it would be reviewed following any such change.

Q. Can you give an example of this? [1150] A. Referring to the Malden area, we have within the meter reading group three Bill Deliverers who are on the payroll of both Suburban and Mystic on a fixed 50-50 basis. This is a good example of where a fixed percentage allocation is made and the employees are paid in accordance with this allocation by each company involved.

Q. Please explain the 50-50 allocation here? A. These employees deliver bills in the areas of Malden, Everett, Melrose and Medford. This is combination territory for Mystic and Suburban where there are very nearly as many gas bills delivered as electric, thus the 50-50 allocation.

Q. Would you please explain the time-sheet-basis? A. Again, in this type of allocation, the employee is on the payrolls of the several companies but he records the number of hours that he works for each company and then is paid by each company in accordance with such hours.

Q. How would changing conditions be reflected by this method of allocation? A. A change in work load between companies is automatically adjusted by this method. Each company could pay part or all, or nothing for a certain payroll period, depending upon the hours worked by the individual.

Q. What type of employee would use this basis? A. Not many in the treasury and accounting function as this type of allocation is used generally where the amount of [1151] work performed for each company would fluctuate from day to day. An engineering type employee working for several gas companies or for gas and electric companies would be likely to use this type of payroll allocation. In the treasury and accounting functions, the day to day work load is quite

consistent as between companies and, therefore, a fixed type of allocation is proper in this area.

Q. Could you give us an example of the billing of actual time or the time-sheet-basis as you called it? A. As I mentioned, there are few if any instances in the treasury and accounting organization where the work for each company fluctuates enough to make a time-sheet-basis practical. The Display Department in the Malden area, where combination window display work is performed for both Mystic and Suburban, allocates the work performed for each company on a time sheet basis. The employees of this department are carried on the payrolls of each company and are paid by each company in accordance with the number of hours worked reported on the time sheets.

Q. Would you please explain the method which you said involves the billing of the flat amount to another company for services performed? A. As in the other situations, this amount must first be developed by work load studies. This is similar to the first method that I outlined where each company pays the employee on a fixed percentage allocation. In this case, however, [1152] the amount which each company should pay is determined and then fixed, but the employee is on the payroll of one company only and is paid by that company only. The paying company then bills the other companies the flat amount and is reimbursed.

Q. Where would you use this type of allocation? A. This lends itself to the situation where a group of employees is performing similar functions for another company day in and day out during the year. The total for the group that should be billed can again be determined by whatever appropriate measurement should be used and a total adequate amount to be billed can be set up.

Q. Would you give us an example of the billing of a fixed flat amount? A. In my description of the Norwood Gas general accounting function, I mentioned that there were

six employees in the general accounting group at Quincy who, in addition to their regular work for Quincy, did various general accounting operations for Norwood. A study of this work load revealed that each employee required varying amounts of time in performing his particular duties for Norwood. These percentages averaged approximately 15 per cent. The percentages were then priced at the rate for each particular job and the sum of these costs plus proper overhead totaled approximately \$600 per month, which was the amount then set up for monthly billing for general [1153] accounting services to Norwood.

Q. Would you give us an example of the payroll offset method? A. This method is used quite generally throughout the combination operations in the retail treasury and accounting functions. An example is Northampton Gas and Northampton Electric in the Western area of the central district. Again, a satisfactory measurement of proper allocation is made and in this case an average is used of the ratio of gross earnings and meters in service. The resulting allocation was 40 per cent for Northampton Gas and 60 per cent for Northampton Electric. Payroll costs in the treasury and accounting functions were then kept as nearly as possible to this 40-60 allocation by a review of impending terminations and the hiring of new help.

Q. You mention that this method is used quite generally. Where else is the payroll offset method used? A. The quite highly integrated treasury and accounting functions at Malden and also in the Lawrence area are for the most part allocated among the companies in each area by this offset method.

Q. You mentioned the use of certain factors such as revenue, plant accounts and meters in service when you were discussing the basis for allocations of payroll costs between companies. Are these proper bases for such allo-

cations? [1154] A. Yes, each factor that I have mentioned is usually proportionately indicative of the work in the various treasury and accounting functions. Let us use meters in service as an example. Related to the number of meters in service are items such as service orders, final bills, number of customers billed, cashiers' stubs, and delinquent accounts handled and charged off. These items represent the media upon which the members of the customer accounting function actually perform their daily work. Furthermore, whether the item is gas or electric, it is pretty generally handled in the same manner. If it is a combination, the information for each service is handled in like manner. It therefore follows that a time study of the handling of items such as these would reflect the actual work load for each company.

Q. Can you give any specific examples of this? A. In the Malden area in 1958 at year end, Mystic had 98,758 meters in service and Suburban had 80,307. This represented a 45 per cent electric-55 per cent gas ratio. Now looking at some of the detail necessary to handle these active meters, I would like to quote some figures from a feasibility study upon which our Electronics Committee is working. In November 1959, these companies billed on a bi-monthly basis 40,008 electric customers and 49,762 gas customers. This is an exact 45 per cent-55 per cent ratio. An average month's service orders representing work that must be processed through [1155] several phases of customer accounting were 2,478 electric and 3,426 gas, or a 42 per cent—58 per cent electric to gas ratio. The study of final bills revealed an average number for the electric company of 823 per month and for the gas company 1,106 per month. This is a 43 per cent electric and 57 per cent gas ratio. Cashiers' stubs in the month of October 1959 were counted as follows: 39,286 for the electric company and 51,843 for the gas company, a ratio of 43 per cent

electric and 57 per cent gas. As you can see, these examples of the detail work related to the number of meters in service are very nearly in the same ratio as each company's meters in service are to the combined total.

Q. Do all areas use the same factors in developing a basis for allocation? A. All areas consider all factors and each area attempts to use a basis which will bring about a fair and equitable allocation in terms of work being performed for each company.

Q. Please explain that a bit more? A. Again, referring to Mystic and Suburban we find that the electric revenue is 55 per cent of the combined total gas and electric revenue—just the opposite ratio from that of meters in service. However, there is a local situation whereby a few very large industrial customers of Suburban account for almost 20 per cent of Suburban's gross revenue. Certainly the treasury and accounting work load is not affected by these few [1156] customers proportionately and, therefore, a revenue measurement alone in this area would not be fair and equitable.

Q. Just what is the allocation in the Malden area then? A. The ratio of meters in service was selected as the best overall allocation for treasury and accounting functions in Malden.

Q. Do any other factors point to this as fair and equitable? A. Yes, in addition to the work load in customer accounting which I have already itemized, we find that the annual general accounting work load for these two companies may be measured in the number of vouchers prepared and processed through this function, which for Suburban is about 7500 and Mystic about 8400, or a 47 per cent electric and 53 per cent gas ratio. Weekly time sheets processed on an annual basis are about 15,900 for Suburban and 20,100 for Mystic, or a 44 per cent electric and 56 per cent gas ratio. Each of these items represents a sub-

stantial amount of accounting distribution work which must flow through the General Accounting Department and presents a firm basis for measuring work load.

Q. Mr. Lother, you have described in some detail the allocation base for payroll costs in Mystic and Suburban. Have you and people under your supervision reviewed and tested the equitableness of the allocations in the other [1157] areas of the NEES System? A. Yes. While the weight given certain factors may vary somewhat due to local conditions, similar factors have been used in like fashion in each area and we have satisfied ourselves that these allocations are fair and equitable.

Q. Now, Mr. Lother, would you tell us something about the use of buildings in combination territory? A. In most instances where combination operations are in effect, the building or buildings occupied by the two or more companies involved are owned outright by one of them. We do have situations where jointly occupied space is leased by one of the companies, but this is mostly in the area of branch stores and offices where the space is leased from an outside party.

Q. Would you please give us some specific examples of jointly used buildings? A. In the Malden area, the main office building at 157 Pleasant Street, Malden, is owned by Suburban Electric Company but is occupied jointly by Mystic and Suburban. In Lynn, the office building on Exchange Street, Lynn, is owned by Lynn Gas Company but is occupied jointly by Lynn Gas and Lynn Electric. In the Lawrence area, the principal office is located at 370 Essex Street in downtown Lawrence owned by Merrimack-Essex Electric Company. This office is occupied jointly by Merrimack and Lawrence. One of the few instances [1158] where a principal office is leased is at 205 Washington Street in downtown Salem where North Shore's main office is in a building leased from an outside party by Merrimack but

which is jointly occupied by both North Shore and Merrimack. With regard to the joint occupancy of branch stores, we find examples in the Malden area where stores located in Medford, Revere, Everett, Melrose and Winthrop are all rented from outside parties and are occupied jointly by Suburban and Mystic.

Q. Are buildings other than office buildings occupied in a similar manner? A. Yes, they are. An example would be a building owned by Merrimack and located at 173 Methuen Street in Lawrence which houses both electric and gas distribution and engineering activities. The distribution and utilization departments, the commercial and industrial sales group and the appliance installation supervisor of Lawrence Gas are all located at, or work out of, this location. Furthermore, the garage, the stores and customer service order activities, all jointly operated, are located on Methuen Street in buildings owned by Merrimack.

Q. Are there rental arrangements covering these situations? A. Yes, they are usually rented on an annual basis with the rent being billed monthly.

[1159] Q. Who is responsible for the rental arrangement? A. As in the area of payroll allocation, this is a management decision arrived at usually after consultation with the local Treasury Representative who would supply studies relative to investment, operating costs, and so forth.

Q. On what basis would this rent be charged? A. Buildings, such as the main office buildings in Malden and in Lawrence, and the operational department buildings which I just described, are rented on a cost per foot occupied basis.

Q. Would you describe how this cost is developed? A. Usually an annual cost study is prepared, taking into consideration such items as taxes, depreciation, insurance, building maintenance, utilities, and a fair return on invest-

ment. The building area available for rent is then analyzed floor by floor with the total square footage for each company itemized. This can then be applied against the annual operating costs of the building in order to develop a proper rental charge.

Q. What about the branch stores that you mentioned in the Malden area. Would they be handled in a similar fashion? A. The principle is the same but the basis for allocation is slightly different. A branch store is set up pretty much to handle customer traffic in the areas of cashiering, customer relations and appliance display. It was, therefore, [1160] the opinion in Malden that the rent and expenses of these branch stores should be in proportion to the amount of customer traffic served and, therefore, these costs are allocated on a meter basis.

Q. Mr. Lother, what was your participation in the Ebasco study? A. I participate in the preliminary conferences with the Ebasco consultants concerning their undertaking of the study. In addition I spent a considerable amount of time with the Ebasco consultants. For the purpose of acquainting them with the many phases of System operations, particularly those under my jurisdiction. I also devoted considerable time helping to prepare, and reviewing the voluminous material which Ebasco had requested concerning particularly treasury and accounting operations and also some of the other System operations. This includes meetings with the Ebasco consultants and also meetings with company personnel.

Q. Will you tell us something about the people under your supervision who also participated in the Ebasco study? A. Most of the information which was necessary for this study was of a type which could best be furnished by the local treasury and accounting organization. Most of the local treasury and accounting supervisory personnel in Massachusetts have devoted some part of their time during

the last year to furnishing information to Ebasco. This is particularly true of general accounting personnel and the supervisory personnel in customer accounting and in stores accounting activities. [1161] This also involved the Treasurer and Assistant Treasurers, the Auditors, the Comptrollers, the Chief Accountants, and the various staff assistants.

Q. What type of information did these people furnish to Ebasco for the study? A. Material included analyses of payroll, personnel, billing, customers, buildings, equipment, work loads, telephone calls handled at switchboards, service orders and similar items.

Q. And were these analyses of a comprehensive nature?
A. Yes, they were very much so.

Q. Why such an exhaustive study of your existing organization? A. Since we had requested Ebasco to determine the full effect of severance of the gas business upon New England Electric System and its gas and electric subsidiaries, it appeared that, if the conclusions as to the effects of severance were to be valid, they must of necessity be based upon a study which included a review of the total system organization.

Q. Could you give us some idea of just how comprehensive some of these analyses might be that you say were furnished by personnel under your supervision for Ebasco? A. In the area of personnel and payroll, the local treasury and accounting departments furnished information showing by function and job classification and numbers of employees [1162] within each of those categories, the annual payroll at January 1, 1959 for those employees engaged in joint operations. Additionally, the same people furnished information to Ebasco concerning the basis for the allocation of these payroll charges among the companies. With regard to buildings, personnel under my supervision at the local treasury and accounting offices developed information re-

fleeting building use by area and function and company occupancy expressed in terms of square feet and personnel. On these same buildings, information was submitted with regard to ownership or rental basis and the allocation of these costs among the companies.

Q. Was this comprehensive information checked in the field by Ebaseo? A. Very definitely. I know that Ebaseo consultants reviewed and verified the information submitted to them by personal contact with our employees and supervisory treasury and accounting people in the field. For example, I know personally that Ebaseo consultants, together with local Treasury Representative and other supervisory accounting employees, spent time at all locations where gas or combination gas and electric treasury and accounting activities were performed. The personnel under my direction tell me that during these periods of inspection by Ebaseo that interrogation of employees engaged in these functions was made by the Ebaseo consultants.

[1163] Q. In your opinion then, was a comprehensive examination made by the Ebaseo consultants of local treasury and accounting operations at January 1, 1959 in the several gas companies and in those electric areas affected by severance? A. I would say that because of the comprehensiveness of the information submitted to them by myself and the employees under my supervision and because of my personal knowledge of their review of financial statements and other data available to them and my personal knowledge that they physically observed treasury and accounting functions in the field, that their examination of the retail treasury and accounting operation as it existed in the five territories serving gas and electric customers was very complete.

Q. Did your cooperation with the Ebaseo consultants and with the supplying of material you have just described? A. No. After furnishing all of this material to the Ebaseo

consultants, we also cooperated with them as they proceeded into the second phase of the study which was to arrive at conclusions as to the effects of severance upon these gas companies and upon the remaining electric companies.

Q. By "we" do you mean yourself and the administrative and supervisory employees of the treasury and accounting functions under your supervision? A. Yes. Just as these people cooperated with Ebasco in developing the information concerning our existing organization, [1164] our people cooperated with Ebasco consultants with reference to the personnel, housing and the equipment needs in the event of severance.

Q. Could you tell us something now about the light in which the treasury and accounting functions were considered in the event of severance? A. The treasury and accounting area, of course, was one of the major problems that Ebasco had to contend with in connection with their study. As I have previously discussed, the highest degree of combination operations is within the treasury and accounting organization. In this area almost all functions are carried on jointly with affiliated companies. Therefore, the problem of developing independent gas and electric treasury and accounting operations with a complex one.

Q. How was this problem solved? A. Fortunately, there are yardsticks for large areas in treasury and accounting functions, which can be precisely measured. Let us take for an example the general accounting. The work here consists of maintenance of general and detailed ledgers, the preparation of cash and journal vouchers, the handling of material issued tickets and automobile time reports, the handling of weekly time sheets and preparation of payroll checks, the work on detailed plant records, and other routine clerical functions which are usually preformed on a week by [1165] week or month by month basis.

Q. Of what use are these yardsticks? A. With these yardsticks it is usually relatively easy to determine generally the personnel requirements necessary to perform these functions. By this I mean that a certain volume of work load over a given period such as a week or a month will mean that a certain number of clerks are very definitely needed to handle the paper work involved. Once you become familiar with the volume of work that is performed in a particular department, it is relatively easy to establish personnel requirements.

Q. Is this also true in a function such as customer accounting? A. The customer accounting function can perhaps be measured a bit more precisely than even that of general accounting.

Q. How is this so? A. The meter reading function in customer accounting bears a very definite relationship to the number of customers or meters to be read. Therefore, for a given geographical area or density of customers, the meter reading requirements can usually be determined within general limits.

Q. What about other activities in customer accounting? A. Let us take for example the unit desk operation. The unit desk consists of a large fireproof metal desk where the accounts of customers, including ledgers, cash stubs and [1166] meter reading records are maintained. Each unit desk handles a substantial number of customer accounts, usually somewhere in the neighborhood of seven or eight thousand meters. The clerk at the unit desk performs the function of posting cash to gas and electric accounts, posting arrears prior to billing, cycle balancing the accounts by sections, entering service orders on the meter reading records, preparing final bills (manually), establishing controls for machine billing and many other miscellaneous duties of the accounts receivable routine. In some areas, telephones are located right on the unit desk so the clerk

is able to handle directly those calls from customers regarding account balances, billing dates, reading dates, bill calculation and any number of general information calls. Most of the operation can be measured quite precisely and the overall work load set up on the desk accordingly.

Q. What other functions are like this? A. The cashiering function is another activity which is dependent to a large degree upon the particular work load. As a matter of fact, all of the clerical functions within the customer accounting group can usually be determined rather precisely as far as number of accounts handled, number of meters read, number of collections or shut off calls made, number of telephone calls made for collection, number of cash payments received from customers, number of customer inquiries [1167] by telephone, number of record cards to be maintained, number of bills to be delivered or mailed, number of telephone calls coming through a switchboard, number of pieces of mail received, and all other items of a similar nature.

Q. What about stores accounting activities? Can they be measured in this way also? A. In general, yes. The workload of the stores department is usually established by the construction program, merchandise sales activities and repair parts handled. A substantial amount of the work in this department consists of posting the stores ledgers from sales slips, material issued tickets, vendors, invoices, material received reports and other items. Therefore, generally speaking, we can also consider that stores activities are again an item which can be measured as to workload.

Q. Is it proper to say then that the staffing of the general accounting, customer accounting and stores departments may be in a large part determined through the type of yardsticks that you have mentioned? A. Yes, sir.

Q. Mr. Lother, are you able to talk in more specific terms

concerning these yardsticks, for example, in regard to the Pro Forma Lawrence Gas Company? A. Yes, I believe I can be more specific. For example, if we consider the unit desk operation about which I have talked [1168] at some length, we find that in the office of Merrimack and Lawrence, located at Essex Street in Lawrence, there were 44,814 electric meters of Merrimack, and 33,297 gas meters of Lawrence handled by eight unit desks. This means that on a combination basis, each desk averages 9,764 meters. As presently allocated, four of these unit desks are operated by clerks on the payroll of Merrimack and four are operated by clerks on the payroll of Lawrence.

Q. Mr. Lother, may I interrupt you and ask if this is a high, low or medium average number of accounts per unit desk? A. For a combination operation, this is a high number of accounts per desk.

Q. Thank you. Would you please continue with your description of the yardstick involved here? A. In the event of severance, it is obvious that the 44,000 plus accounts of Merrimack will be handled by unit desks separate from the 33,000 plus accounts of Lawrence. If, in the event of severance of the gas properties, no change were made in the number of unit desk operators when we apply our yardstick of number of accounts per desk, we would find that the new electric desks would be required to handle well over 10,000 accounts per desk, while the unit desks of the New Lawrence Gas Company would drop to an average of 8,324 accounts per desk. Our long experience with this type of operation tells us that the 10,000 plus figure, which the Merrimack [1169] girls would be required to handle, is excessive and cannot be expected. Therefore, one of the effects of severance would be the requirement of an additional unit desk in the Merrimack customer accounting operation at Lawrence. Looking back at the Lawrence Gas operation, we see that the workload per unit desk has

dropped to 8,324, but again by applying our yardstick we see that we cannot reduce the Lawrence desks from four to three because this would mean that each clerk would have to carry in excess of 10,000 accounts which we have already said is an excessive workload.

It was this type of thinking and application of yardsticks that our treasury and accounting supervisory employees in conjunction with Ebaseo consultants applied to the pro forma organizations in order to test their reasonableness.

Q. Why is it necessary for personnel under your supervision to be concerned with how these yardsticks were applied? Could not the Ebaseo consultants merely have taken numbers of meters and employees and divided one by the other, coming up with essentially the same figure that was the end result? A. In some cases this would have been perfectly valid but in many other cases workloads would be affected by local conditions and it was in areas such as this that the treasury and accounting employees in the field were able to give Ebaseo background factual information.

Q. Could you explain that a bit further, please? [1170] A. If I may again refer to the unit desk operation, you will remember that as I described it, some of the duties are the entering of service orders on the meter reading records and the preparation of final bills in addition to the handling of telephone contact in some areas directly from the customers. Consider for a moment areas such as Gloucester, which is part of Merrimack's and North Shore's common area, and Revere and Winthrop which are part of Suburban's and Mystic Valley's common area.

These are all tremendously popular summer resort areas with customers moving in and out constantly and thereby being added and dropped from the records maintained by the unit desk operator. This means that the unit desks handling these highly active service areas are not able to handle the complete function for quite so many customers

because of the heavy activity in a few parts of the overall unit desk operation such as the service order phase which I have already described. The weighing for local conditions was an area in which the local treasury and accounting people contributed very definitely to the overall effort in making the Ebaseo study.

Q. Would unit desk operation be the only area in which the people in the field under your supervision would be able to reflect the weight of local conditions in the application of the yardsticks you have mentioned? [1171] A. Certainly not. This would be true of areas such as meter reading and cashiering to mention two other examples.

Q. Without specific details, could you explain a little bit more about these two areas? A. With regard to meter reading, obviously suburban areas of single homes will require more readers to handle the same volume of work than would be required in tenement sections where one stop may pick up multiple reads. Even within the so-called tenement areas, local condition will vary the number of readers that will be necessary for in some areas meters may still be located in bathrooms or closets within the tenements as contrasted to other areas where they may be set up in the cellar in a battery fashion. Obviously, the latter will require less effort to read than the former. Again, the area in square miles will have an effect upon the volume of work that a meter reader can perform in a day.

With regard to cashiering, we find that in our Lawrence area, for example, our customers have for many, many years been in the habit of paying by cash over the counter for their gas and electric service. In other areas we find a very heavy concentration of payment by check through the mails. Some of this depends upon the effort which local banks make to sponsor the setting up of checking accounts.

Q. These then are some of the factors which the people under your supervision in the field explained to the Ebaseo

[1172] consultants as they developed the severance study?

A. That is correct.

Q. You have been describing these factors in terms of customer accounting work. Were the general accounting and stores functions handled in the same manner? A. Yes they were. Here again, the people under my supervision in the retail treasury and accounting operations in addition to making available to the Ebasco consultants the various measurements of work such as vouchers prepared, material issue slips, automobile time reports, weekly time sheets, work orders and other items that could be measured, also acquainted these consultants with local variations that might affect the application of these yardsticks.

Q. Could you give us just one example of what you mean in this area? A. Well, at the risk of getting too detailed and perhaps confusing the issue, I will just mention the preparation of vouchers in the accounts payable section as between companies using punch card equipment and those without. Because the posting is done by hand in the latter companies, we make use of what we call a multiple voucher where many, many payments are entered on a recapitulation sheet within one voucher and, therefore, the summary of that voucher is entered on the books of account and not each individual entry.

The machine company is not too much interested in [1173] saving these individual postings as it is all done by punch card equipment and, therefore, it is practical in a company using punch card equipment to eliminate the extensive use of multiple vouchers in order to save the manual recapping within the voucher and let the mechanized equipment do all the work. Since none of our punch card companies prepare accounts payable checks on machines, the check load would not vary on this basis from company to company, only the number of vouchers.

Q. Mr. Lother, how else did personnel under your supervision in the retail treasury and accounting operation, contribute to the Ebasco study? A. Contribution to the overall effort by these people in the field continued right up to the final gun. As conclusions were reached and reports prepared by Ebasco, copies of these were sent to certain administrative and supervisory treasury and accounting personnel in the field for review, evaluation and comment. These field comments were then considered by myself, Ebasco and others involved in the project to determine the weight that should be placed upon them.

Q. From your testimony it would appear that in varying degrees certain of the personnel under your supervision in the field were involved in all phases of this entire study? A. Yes, with regard to the retail treasury and accounting operation, I would consider that a fair observation.

Q. Mr. Lother, have you reviewed the pro forma estimates as contained in the Ebasco reports for the several gas companies? [1174] A. I have.

Q. In your opinion, are the projections sound that were made with respect to the treasury and accounting functions in the pro forma companies? A. Yes, in my opinion the projections that have been made in the Ebasco reports with respect to treasury and accounting functions are sound.

Q. Mr. Lother, in summary what are some benefits to the treasury and accounting operations of the gas companies you have described as a result of the gas companies being part of NEES? A. I would like to express the advantage in terms of personnel and facilities, including equipment, and while I may be somewhat repetitive I will try to summarize.

Q. Please proceed with those ascribed to personnel. A. Of course, with regard to personnel, an important

benefit is in the reading of customers' meters. The two-reads-with-one-stop routine obviously saves many payroll dollars. As I have also explained, personnel costs are reduced in treasury and accounting functions through the joint handling of customers' accounting records by one clerk, the joint collections of payments by one cashier and one collection agency and the joint execution of combination meter calls. We are able to save on personnel and do a better job for all companies through cross company credit reference and we gain [1175] flexibility personnel wise due to diversity in peak work loads. Furthermore, because of many areas with cross company bidding rights able employees have more opportunities for promotion which is, of course, mutually beneficial as it not only gives greater opportunities to employees, but also makes for better use of an employee's talents. In our treasury and accounting activities, supervisors of a higher caliber are available to the gas companies.

Q. Now—with regard to facilities and equipment? A. The facilities to house the treasury and accounting personnel are, of course, at a minimum because of the combined operations within the system. The combination use of equipment is a major benefit to the gas companies as a part of the system. Joint use of printing equipment, mailing equipment, expensive and large customers' record files, calculating machines, stockroom equipment and much more adds to the gas company benefits, not only by saving duplicate investment in the equipment but again, because of the saving in space required.

Q. Are there other benefits? A. Yes. I may have mentioned it much earlier, but I would like to emphasize that the treasury and accounting functions of the gas companies receive great benefit from association with the specialists of NEPSCO.

Q. Please elaborate. [1176] A. With respect to the audit group, it not only allows savings to the local gas companies by reducing the scope of the independent audit, but it provides a source of help for any company that has a temporary personnel problem in its experienced accounting staff. Many times audit personnel have been able to fill what would have been a serious and costly accounting personnel gap for local companies. The training received by auditors makes this group valuable as replacement personnel for supervisory movement.

The systems and methods group is prepared to supply services relative to forms and procedures so that the most up-to-date information and advice is readily available to the field at a minimum of cost.

Q. Do you feel that the loss of the benefits of joint operation and of the available service of NEPSCO could be serious, would be serious to the companies upon separation from the NEES system? A. I certainly do.

Mr. Dunn: That completes the testimony of this witness.

Mr. Quarles: I have one other witness that is going to take a half hour. If you are willing, I realize the hour is late.

Hearing Examiner Ewell: I will ask the other parties. [1177] Mr. Nowlin: I would appreciate waiting till Monday, but I would not object.

Mr. Quarles: I would not press it if it is inconvenient.

Hearing Examiner Ewell: Off the record.

(Discussion off the record.)

Hearing Examiner Ewell: All right, call your next witness.

Mr. Quarles: And I would like the privilege of having Mr. Vorenberg examine this witness.

Hearing Examiner Ewell: All right.

Whereupon,

C. W. PEARSON

was called as a witness and, after being first duly sworn,
was examined and testified as follows:

Direct Examination

By Mr. Vorenberg:

Q. What is your name? A. C. W. Pearson.

Q. By whom are you employed? A. Ebasco Services Incorporated, Insurance Department.

Q. What is your position there? A. Senior Consultant.

Q. What are your duties? A. I am responsible for all phases of planning, maintaining [1178] and revising the corporate insurance programs of the clients of Ebasco.

Q. What is your experience record? A. I have 35 years' experience in the insurance business, having been with the Home Insurance Company from 1925 to 1930, handling general cover contracts for countrywide accounts; employed by Clarence E. Cooper & Co. in the years 1930 and 1931 as an inspection engineer; employed by Richard L. Roberts, Inc., subsequently consolidated with Frank & DuBois during the years 1933 to 1942 as Accounts Supervisor and New Business Development; and from 1942 to the present date employed by Ebasco Services Incorporated as Engineer, Consultant and Senior Consultant.

Q. What does Ebasco do for its clients in the field of insurance? A. Ebasco furnishes specialized insurance consultation services based upon many years of experience with all types of industry. It determines and evaluates the loss potential of the client's risk; it helps to develop the insurance philosophy on the risk which may be handled within the company and those for which purchased insurance protection is more advantageous; it assists in the initiation or adjustment of a workable insurance program;

it assists in insurance coverage arrangement and administration.

Q. What specific experience have you had in insurance [1179] matters in connection with electric and gas utility companies? A. I have been directly responsible for the domestic and foreign insurance programs of companies served by Ebasco. Currently I am the Senior Consultant in the Insurance Department of Ebasco Services, with ninety retainer clients in the electric light, power and gas business.

Q. What is your educational background? A. I studied civil engineering in the Brooklyn Polytechnic Institute during the years 1931 to 1933; I completed casualty, marine and surety courses in the Aetna School of Insurance during the years 1936 to 1938; and completed my safety engineering studies with the Manhattan College of Engineering in the year 1942.

Q. What organizations and associations are you a member of? A. I am an associate member of the Engineering Section of the American Society of Safety Engineers; I am a member of the Insurance Section of the American Management Association; I am a member of the American Society of Insurance Management; and I am an alternate representative, with Mr. W. B. Sims, Manager of the Insurance Department, on the Insurance Committees of the American Gas Association and the Edison Electric Institute.

Q. Now Mr. Pearson, what did you do in connection with Ebasco's work in this case? [1180] A. I was asked to make, and did make, a study of the effect of severance of the gas business on the insurance programs of the NEES affiliates, and a comparison of present costs and estimated costs. This was based on the assumption that each gas company severed would operate as a separate organization and purchase insurance protection as similar

as possible to that now carried under NEES blanket contracts.

Q. How did you go about carrying out this assignment?
A. I asked that NEES officials responsible for the purchase and administration of the blanket insurance program provide me with detailed information on the coverages in force on January 1, 1959, the rates and rating procedures, and the loss experience. I then reviewed the insurance policies and records from which this detailed information was obtained to verify that it was sufficient to make the detailed study necessary to determine the effect of changing from a blanket insurance program to the purchase of individual programs for the eight independent gas companies.

In making this study, I called upon the specialists in the individual fields of insurance in the insurance department of Ebaseo to verify the computations made, and conferred with other Ebaseo experts. My discussions and review were not confined to Ebaseo or system personnel, but included outside professional services such as insurance brokers, insurance agents and insurance companies who handled the blanket insurance [1181] contracts for NEES.

Q. Would you please give us examples of what outside people you consulted with? A. As respects the boiler insurance, I reviewed this with Mr. D. E. Kee, Manager of the Boiler and Machinery Production Department of the American Motorists Insurance Company.

Automobile Fire and Theft, Comprehensive Crime, Water Heater Warranty Bond, Legal Liability Gas Explosion, Direct Damage Gas Explosion, Extra Expense Insurance, Fire, Extended Coverage and Vandalism and Malicious Mischief, and Sprinkler Leakage Coverages were reviewed with Mr. John T. Keys, of the firm of Obrion, Russell & Co.

The Workmen's Compensation, Public Liability, Automobile Liability, Excess Liability, Valuable Papers were reviewed with Arthur J. Gladney, of the firm of Marsh & McLennan.

The Group Insurance Plan, which provides Life Insurance, Accidental Death and Dismemberment Insurance and Weekly Accident and Sickness Insurance was reviewed with Mr. Leo Skelley of the Metropolitan Life Insurance Company.

Q. After gathering all this information what did you do? A. After this review and discussion of the basic construction of the NEES insurance program, I determined what coverage could be obtained by each of the eight gas companies [1182] so as to approach as near as possible to what I considered an adequate insurance program. The insurance figures shown in the second part of each section of the Ebasco report for gas companies reflect the increased cost for each gas company of such a program.

Q. From what you have said, I gather that Ebasco has knowledge of insurance markets and is familiar with insurance coverages available to the gas industry. How does the NEES program compare with the industry? A. It is (and was on January 1, 1959) a well designed program and should provide protection against losses normally insured against by the gas industry.

Q. Mr. Pearson, I show you a proposed exhibit consisting of ten sheets stapled together, the front sheet being entitled "Summary Effect on Insurance Costs Which Would Arise Through Severance of the 8 Gas Companies from the New England Electric System Holding Company System". Did you prepare this? A. Yes, I did.

Q. Does it correctly set forth the information it purports to show? A. Yes.

Mr. Vorenberg: Mr. Hearing Examiner, I offer this as Respondent's Exhibit No. 89.

Hearing Examiner Ewell: Any objections? Or, are there any questions?

[1183] Mr. Nowlin: I would suggest it be marked as identified at least until the witness gets through and we find out what it is.

Mr. Vorenberg: No objection to that.

(Respondent's Exhibit No. 89 was marked for identification.)

By Mr. Vorenberg:

Q. Are the total figures shown in this exhibit the same as appear in the Ebasco Report? A. Yes.

Q. What is the overall dollar effect of severance on insurance costs for the eight gas companies? A. By combining the increases shown on each page of the exhibit the aggregate estimated annual increase is approximately \$281,000.

Q. Will you indicate in more detail than you did previously what are the major factors causing the increase in premium costs? A. In general, the appraisal of the gas risk to be taken by the insurer is highly speculative; if its probable premium volume is limited, the underwriting and placement problem is increased. This is very evident in the case of these eight individual gas companies. Gas utilities as such have had a very poor liability experience throughout the country. A gas explosion is a spectacular occurrence, and when it happens you can be assured that the resultant effect will be a rash of claims made against the gas utility. Many of these occurrences [1184] have each resulted in better than a million dollars in settlements.

Q. Please give a few examples of what you mean. A. In Ottawa, Ontario, Canada, on October 25, 1958, there was an explosion in the basement of a building resulting in the demolition of three buildings and severely damaging three others—one fatality and injury to 40 persons. The estimated property damage loss was between \$3,000,000

and \$4,000,000. The casualties could easily have numbered between 500 and 600 if the explosion had happened on a weekday when the demolished office buildings would have been occupied. If the explosion had happened two hours later, 2,000 children would have been in attendance at a special program in the explosion area.

In February 1957, there was a gas explosion in Reno, Nevada. The estimated property damage claim was \$3,000,000.

In 1951, there was the Brighton, New York explosion, which destroyed and partially demolished many private dwellings which resulted in Property Damage losses of \$1,600,000.

These are just a few random examples. In addition to these, of course, is the well-known vertical cylindrical liquified gas holder explosion in Cleveland, Ohio, on October 20, 1944. I am informed by the Insurance manager of Consolidated Natural Gas Company, a holding company of which East Ohio Gas Company of Cleveland is a member, that the total of all claims [1185] against East Ohio at that time was approximately \$7,000,000, and that at today's costs the claims would undoubtedly exceed \$10,000,000.

Q. What effect does the potential for what you have called spectacular losses have upon the cost of insurance?

A. An insurer requires a consideration represented by premium for its promise to pay or reimburse an insured for a loss. Because of the hazard or risk associated with a gas utility, the insurance underwriters require high premiums to provide liability insurance protection. A small gas company, with a small spread of risk and small revenue, together with the catastrophe hazard or risk, does not lend itself to low premium costs which are associated with large risks with a wide spread of risk and large revenues.

Less spectacular, perhaps, but occurring closer to home, was a gas explosion which happened as recently as a few weeks ago. In that accident an unoccupied residence in Pawcatuck, Connecticut, was completely destroyed and an adjacent home and three other tenement houses were set on fire. The damage was estimated at only \$35,000, but had the residents of the destroyed house been at home, injury claims might well have reached substantial amounts. Incidentally, the accident occurred in the nearby territory of a relatively small gas company which, until recently, was a subsidiary of NEES. Each time a large claim occurs, the underwriters insuring a gas [1186] company's liability are of course called upon to pay. Referring, for example, to the Brighton, New York claim which occurred in 1951, chaos was created in the insurance market. This was because a large insurance company lost its reinsurance treaty causing them to cancel their excess insurance coverage on gas risks which they were underwriting. The market was already limited in the United States for gas risks, so the now uninsured companies approached Lloyds' underwriters, resulting in a seller's market. Underwriters took advantage of their position and resultant rates were from two to ten times greater than these companies had previously paid for their insurance. The large risks, of course, were faced with the lower rate increases.

Q. So that we can understand how the projections in the exhibit were arrived at, would you take us in some detail through the various types of insurance as applicable to North Shore Gas Company? A. I would be glad to do so. The insurance protection falling under all risks insurance—the first item on the North Shore sheet—is stated as being Contents of Motor Vehicles and Destruction of Valuable Papers. Neither of these coverages represents large premiums because of the limited dollar exposure. The North Shore Gas Company could undoubtedly absorb

any of the small losses associated with losses of motor vehicle contents. In view of the premium levels for this type of insurance for a single and a very small company, they probably [1187] would not insure.

As respects the destruction of valuable paper, this is considered a good coverage to have on the basis of our review. North Shore could purchase \$50,000 of coverage as against the \$300,000 they now have under the NEES program at an increase in annual cost of \$70.

Q. Please continue. A. The next item on the North Shore schedule is the Automobile Physical Damage Insurance which provides coverage against losses caused by fire, lightning, transportation, theft, windstorm and other perils. Because there is now a NEES Blanket Policy on this, it would be necessary to rerate this insurance under the rules and regulations of the National Automobile Underwriters Association for this risk in the State of Massachusetts. The resulting additional premium for North Shore Gas Company would be \$320.

Q. Please continue. A. The next grouping of coverages falls under the all inclusive term "Bonds". The Comprehensive Crime policy includes Fidelity, Money and Securities, Forgery, Collection Agents and Open Stock Insurance protection. Over a period of years, because of the good experience under the NEES Blanket policy, the overall risk has been rated with high experience credit modification, reducing the cost to the individual gas companies materially.

[1188] This coverage represents a substantial exposure and premium expenditure. Taking advantage of all credits, the sheet for this company shows an additional cost of \$2,530 for this insurance.

Q. Does this coverage represent a substantial premium expenditure? A. It does.

Q. Do you consider that this insurance coverage is necessary? A. Yes, sir.

Q. I note on the North Shore schedule that as respects Open Stock you state that the separate company would not insure. Why is this? A. The manual rate for this coverage for the first \$5,000 of exposure is \$6.75 per \$100. The next \$5,000 exposure is at a rate of \$5.50. This reduces for the next two \$5,000 increases to \$3.75 and \$1.75 respectively. All exposure over \$20,000 would be written at a rate of \$1.00. The exposure of the individual gas companies is represented by a stock of stoves, water heaters, and so forth, which represent large units and, therefore, would not be subject to a substantial loss, and because of the high premium requirement, I believe that it would not be imprudent for the individual gas companies to self-insure this portion of the risk. For instance, North Shore reports an exposure of \$86,000. The annual cost [1189] to insure against open stock burglary would be \$1,547.50.

Hearing Examiner Ewell: What do you mean by open stock burglary?

The Witness: That is in the warehouse, on the store premises where you have it on the floor. The heaters, or stoves, whatever it happened to be. It is pretty hard to tell, that is to say, it is pretty hard for anybody to steal a lot of them. That is the idea of this.

Hearing Examiner Ewell: All right.

Mr. Vorenberg: I will continue.

By Mr. Vorenberg:

Q. Would you please continue your review of the schedule? A. The next item under bonds is the Water Heater Warranty Bond, which provides insurance protection as a warranty on the manufacturer's guarantee in connection with a water heater rental program. I think this is a form of insurance which North Shore should have even at the

higher rate which it would have to pay on an independent basis. The insurance broker handling this coverage had a great deal of difficulty in placing it, and to disturb the overall coverage would of necessity require a renegotiation of this coverage for the individual company. Because of the lack of spread of risk and limited market, the North Shore premium would increase \$1,300.

Q. Please continue. A. The next grouping of coverages comes within the purview of casualty insurance and represents the heart of the [1190] problem as respects insurance costs. For the purpose of clarity, I will discuss each form separately, the first being workmen's compensation.

Workmen's Compensation insurance is actually not for the purpose of indemnifying the employer, but to carry out the employer's obligation under the Workmen's Compensation Law of Massachusetts. This insurance is a necessary item in the operations of the gas companies. The rating basis for Workmen's Compensation is specifically set forth in the manual issued by the National Council on Compensation Insurance. The premium is based on payrolls under specific classifications, which classifications are subject to a stated rate. On this basis, the estimated annual Workmen's Compensation premium for the North Shore Gas Company would increase \$5,200.

It is not practicable to apply a retrospective plan to the North Shore program as was used under the NEES program because the effectiveness of the premium savings under such a plan applies to large risks of high premium volume only.

Q. Would you please continue with the Casualty program? A. I will take up the next two items, Personal Injury and Property Damage, relating to the General Liability exposure of the operations of the individual companies. Similar to Workmen's Compensation, the basis of arriving at a premium are payrolls times a rate which is found in a manual issued by the National Bureau of

Casualty Underwriters. There are many rateable items under General Liability insurance, but [1191] for comparative purposes and to be on the conservative side, we have used only the Manufacturers and Contractors portion of the liability manual.

In general, the experience of the eight companies has been good. Therefore, the rates used in our pro forma calculations include credits which result in premium reductions of 45 per cent for Mystic Valley Gas Company; 25 per cent for Lawrence Gas Company, Lynn Gas Company and North Shore Gas Company; 15 per cent for Central Massachusetts Gas Company and Wachusett Gas Company; and 10 per cent for Northampton Gas Light Company and Norwood Gas Company.

Q. What was the basis and result of your computations?
A. The premiums have been computed on the basis that the coverage as indicated would be available to each of the gas companies. As I stated earlier in my testimony, the past loss experience in the gas industry has made the market for this liability coverage very limited and those markets available to a small gas company would undoubtedly restrict the limits of liability available to this small gas company. In that the small gas company is confronted with the catastrophe hazard similar to large companies, the premium costs might be so great for high limits of liability, if there was a market for it, that the company might try to operate without it.

This, of course, jeopardizes the continuance of the companies' business and also places the public in a position [1192] of not being able to obtain proper reimbursement in the event they were injured either through bodily injury or loss of property.

As respects the North Shore Gas Company, the annual premium increase is \$20,400 for the primary insurance coverage.

Q. Please continue. A. The next portion of the liability program is under the Automobile Bodily Injury and Automobile Property Damage. Different from Operations Liability, this insurance covers the exposure of the use of all automotive equipment. Automotive equipment exposure probably represents the greatest source of liability claims. This is due to the large numbers of automobiles on the highways and the problem of drivers' errors. Referring to the North Shore Gas Company schedule, it will be noted that the increase in premium for the individual company operation is \$2,900. The premium is based on the manual issued by the Massachusetts Automobile Rating and Accident Prevention Bureau and because of the past good experience of the North Shore Gas Company, a 5 per cent credit on the manual rates has been assumed.

Q. Please continue on the North Shore sheet. A. The next portion of the Casualty program is the Excess of Primary Coverage. Because of the "built in" hazard of gas operations, high limits of liability are required.

Primary insurers usually do not furnish limits of [1193] liability insurance to the extent necessary to protect against the catastrophe occurrence. Therefore, it becomes necessary to purchase excess coverage to ensure that the company is properly insured against costly liability claims. The increase to North Shore in annual premium for the increased coverage shown on the sheet—assuming it could be obtained—is \$1,320.

Q. Please continue. A. In that the foregoing Primary and Excess coverage do not include Legal Liability Gas Explosion Property Damage, it would be necessary to purchase under a separate policy the Legal Liability Property Damage arising out of gas explosion. This is considered as being the hazardous area of exposure of the gas operations and, therefore, is in my opinion, a required coverage. The rates for this form of coverage are subject to negotiation

and insurance companies' premium requirement varies considerably. Because of the sizeable losses the insurance industry has been subjected to, the market for this form of coverage is limited. In fact, because of adverse experience in the gas industry, many underwriters have withdrawn completely from this market. The North Shore Gas Company would be subject to an increase in premium of \$6,950 with a decrease in insurance limits from \$6,000,900 to \$2,000,000.

Q. Do these casualty premiums represent a substantial portion of the overall increase in cost? A. They do. This is the area of insurance coverage [1194] which should be an absolute requirement for a gas company. However, it is a fact that the small gas companies find Liability Insurance extremely difficult to negotiate. I have shown the estimated cost for the individual companies at certain limits of liability. All NEES gas companies had on January 1, 1959 \$6,000,000 and were considering increasing to \$10,000,000 which Ebasco is also recommending to its clients. I would expect that the Lawrence Gas Company, Lynn Gas Company, Mystic Valley Gas Company and North Shore Gas Company could procure limits of liability under the excess protection to around five million, but of course this would be at a substantial increase in insurance cost.

Q. What would be the effect of the individual company operating without adequate insurance protection? A. If there was no insurance, or insufficient insurance, the public could not obtain reimbursement for its losses. This could have a very serious effect upon the financial standing and the credit rating of the company. The NEES blanket insurance program, however, has made available to the eight companies under discussion a low-cost method of insuring against the catastrophe loss and because of this, the catastrophe exposure is protected by Liability Insurance.

Q. Would you continue with the rest of the schedule?

A. I will. The next section of the schedules concerns explosion insurance protection covering physical damage to [1195] the property of the individual gas companies.

The first coverage, Boilers, Air Tanks, and so forth, provides coverage to an insured in the event the boilers, air tanks and other pressure equipment explodes. It provides insurance to the insured for the value of the equipment destroyed plus damage to surrounding property. The boiler insurance company also furnishes engineering inspection service to the insured in compliance with the pressure vessel laws of the State of Massachusetts. This is considered a good preventive measure against the explosion of pressure equipment. Referring to the North Shore Gas company schedule, you will note that the premium is increased \$480 for the individual company. This is because under the NEES blanket retrospective arrangement, a substantial premium reduction is allowed. However, for the individual company risk it must be rated as per the rules and regulations of the standard boiler and machinery manual.

The second form of coverage shown in this section of the sheet is Direct Damage gas explosion which applies to the companies' distribution system. The placement of the coverage is tied in with legal liability gas explosion and the low premium associated with the NEES blanket contract is because of the wider spread of risk and the large premiums on an overall basis which are involved. There is no filed rate basis for this coverage, and in discussions with underwriters [1196] they indicated that the individual companies involved in this report would probably be subject to an annual minimum premium of \$500 to \$1,000. Referring to the North Shore schedule, you will find that we have used the smallest annual minimum premium as

the estimated cost for the individual company resulting in an additional cost of \$410.

Q. Would you please continue with the schedule? A. The next coverage concerns Extra Expense Insurance. The cost for the insurance was actually generated by the exposures of the individual companies combined. Here again we are faced with the large spread of risk which is generated by all of the gas companies combined, and it is estimated that the individual companies would be subjected to at least twice the cost, with the possible exception of Lynn Gas Company and Mystic Valley Gas Company where the premium might be only about one and a half times greater. The increase in premium for the North Shore Gas Company would be \$650.

Q. In your opinion is this a necessary coverage in the insurance program? A. Yes, it is. In the event that there was a failure in the supplier's facilities caused by the hazards of fire, windstorm, explosion, and so forth, it would cover any extra expense involved in supplying gas to consumers. Further to this, it would also cover the expense involved in shutting off and turning on of customers' meters in the event there was a complete loss of gas supply.

[1197] Q. Would you continue with your explanation of the schedule? A. The remainder of the coverages represented in the schedule as Fire Insurance, Extended Coverages, Vandalism and Malicious Mischief, Rents and Sprinkler Leakage insurance furnish insurance protection to the insureds for the perils mentioned. The rates for these coverages are fixed by the rating bureaus and regardless of the size of the risk, the rate would apply to the amount of exposure. Naturally severance would not cause any change in the premium associated with these coverages.

Q. Would you please continue with the final item on these schedules? A. Yes, I will. The final item is the Group

Life, Accidental Death and Dismemberment and Accident and Health. Under this form of coverage, except on very small group cases, the net cost of insurance is essentially the sum of claims paid plus expense being the insurance company retention. There is very little that can be done to reduce the amount of claims in that claims under this form of insurance are inevitable, so that any analysis of cost is purely an analysis of the experience or insurance company retention. The experience or insurance company retention consists of such items as taxes, commissions, reserves for contingencies and general overhead. Often times this experience [1198] is expressed as a percentage of premium or a percentage of net premiums, i. e., premiums less dividends.

For obvious reasons as the size of the group insured increases, the percentage of cost reduces. This is one form of insurance where it is important to combine coverage for experience purposes under one insurance company policy because the retention decreases percentagewise as the size of the account increases. If you will refer to the schedule on the North Shore Gas Company, you will see that the increase in retention is \$2,410.

Q. In your review of the coverages, I have questioned you specifically about the North Shore Gas Company. Do your comments also apply to the other companies? A. Yes, they do. North Shore Gas Company is a convenient point of reference. In general, all descriptions and comments relating to North Shore are applicable to all the companies with appropriate modifications, all of which are reflected on the sheets for the other companies in Respondent's Exhibit 89.

Q. How is the current insurance program of Nees being handled? A. I have had the opportunity of observing the Insurance Departments of many companies, utilities and industrials. The NEES insurance program is being

very ably handled by the insurance department of the Service Company. I noted [1199] that their duties were so divided that specific persons administered the insurance coverages in a related field. These people are experienced, and in my meetings with them I came to the conclusion that the NEES program was in good hands and being handled on a most economical basis.

Q. If the individual gas companies were to handle their own insurance program after the severance, what provision would be made? A. In the placement of insurance, specialized knowledge which is only obtained from years of experience in a highly technical field is necessary. This is an area which the individual companies probably could not afford to employ a specialist. While outside consultants would undoubtedly have to be employed, no provision has been made for them in the pro forma figures.

Q. Under the System coverages for the year 1958, were the premiums charged the gas companies allocated on a fair basis? A. Yes, they were. In each case the premiums were allocated on the basis of exposures, such as under the Crime Coverage the charge was based on the number of employees; Workmen's Compensation and Liability on the basis of payrolls and Direct Physical Damage coverages on the basis of actual exposure.

Q. What effect would the severance of the gas companies [1200] have on the electric companies' insurance program and costs? A. Actually nothing of a material nature. Naturally some minor effect of "volume of premium" is lost, but in that the insurance coverages for the electric companies now generate substantial premiums, the coverages in force would continue at the same relative cost.

Q. To summarize, what effect would it have on the gas companies? A. I have already discussed and documented the very material increase in cost and the reduction in coverages. As I have mentioned, I feel this reduction

would be most undesirable in a time when coverage should be going up—not down.

Q. Just for clarity, may I ask you whether the basis of your comparison in this testimony has been the insurance program of the System as at January 1, 1959. A. Yes, it has. In my opinion, the loss of economies and of protection would be greater if we used today as the basis for comparison.

Mr. Vorenberg: Mr. Hearing Examiner, I would renew our offer of these 10 sheets as Respondent's Exhibit 89.

Mr. Nowlin: I am going to object to this temporarily because this exhibit is directed toward individual companies rather than giving the effect of the integrated system. The instance on the integrated systems which these companies constitute and until it is related to what I pointed out is the [1201] issue in this proceeding, whether or not these companies constitute an integrated system and that system is related to the electric system, I do not see any relevancy that this system has.

Hearing Examiner Ewell: What do you say to that?

Mr. Vorenberg: I think, Mr. Quarles, in his opening statement and during the discussions, during the last three days, has indicated the basis on which our case has been presented, and the reason for which we are first presenting the effects of severance on an individual company basis. We propose, when the story on this basis is complete in the record, to do what I rather think Mr. Nowlin is suggesting, and that is to show the effects on a combined basis.

Hearing Examiner Ewell: You mean if the gas companies were treated as a system?

Mr. Vorenberg: That's correct. Because it is our contention that the proper basis for consideration of the effects of severance is the 8 gas companies individually we are presenting it on this basis. However, we do not at this

time—At this time we do propose to meet Mr. Nowlin's point at a later point in the record as it comes along in orderly fashion.

Mr. Nowlin: I would suggest it be left marked for identification until such time as the record is developed further on this point.

[1202] Mr. Vorenberg: I do not see that serves any useful purpose.

Hearing Examiner Ewell: I think the objection goes to the weight of the testimony.

Mr. Nowlin: It is more than that, Mr. Examiner, when you look at this as an integrated system as the statute requires and as the order of the hearing states, it is applicable to the system, and they have rendered expert opinion. This is a single integrated gas system is the expert opinion they have rendered.

Hearing Examiner Ewell: I am a little bit curious myself why the company did not prepare it on a system basis rather than on this basis in the first instance.

Mr. Vorenberg: Mr. Hearing Examiner, we do not know whether if severance were ordered these companies would go out as a unit, as two systems, three systems, four systems, five systems, anything up to eight, and as Mr. Quarles has explained we believe we have no basis for assuming that they would go as a single system. Analytically we think the proper basis to examine the first is to indicate what it would cost; that is what the cost would be on an individual company basis, then we will try to show what the loss of economies on that basis can be salvaged.

On a later point, I agree with the Hearing Examiner that this goes only to the weight to be given this exhibit [1203] and in that respect I think it falls right in line with the other rulings on similar points that have been made in the last three days.

Mr. Nowlin: So far I think maybe one or two exhibits were let in that I at that time pointed out that I had qualms about. This falls in the same category as the Ebasco report.

Hearing Examiner Ewell: Isn't it a fact and wouldn't you agree, Mr. Nowlin, that there is no definitive basis for the assumption that these companies would be settled as a system, as one system? Aren't they right in saying that it might be cut up in more than one, which would seem to lend some credence and force to their contention?

Mr. Nowlin: The statute does not say how they are to be disposed of. It says look and see if they are a single operating system and see if they are to be separated. That is a remedy they would have to determine at the time the order was issued. If they decide they want to sell them individually rather than retain them it is their election, but it has nothing to do with the issues in this case. Now, the point is here that their substantial loss from the separation of these companies, that is, they are claiming a substantial loss from the separation of these companies. And the first question is: Do the companies constitute an integrated gas system and that is what we are trying to determine now, not what will happen to the properties. There is no [1204] requirement under this act that they sell them individually or collectively or otherwise. Many companies have distributed the stock of their companies to security holders. This has no relevance to the issues at this time.

Mr. Vorenberg: Mr. Hearing Examiner, I might first point out that the statute does not talk about one additional system. It talks about one or more additional systems. There has been no finding that the gas companies constitute a single system and even if there had been we would contend that analytically the way we are presenting this is the proper way, but, I think the answer to Mr. Now-

lin's point is that in the statute it says the Commission shall permit a registered holding company to continue to control one or more additional integrated public utility systems, if, after notice, it finds that each of such additional systems cannot be operated as an independent system. We offer this on the basis that we do not know. We think the proper basis for consideration of this is first looking at the total cost to the eight companies individually. We will then try to further the analyses of the point Mr. Nowlin is making by indicating what would happen if the eight companies were combined. I think this issue falls in the same category as all the others.

Hearing Examiner Ewell: Would there be any prejudice, I think Mr. Nowlin has raised a very good argument, would there be any prejudice to your case in leaving it in abeyance for identification until a later time.

[1205] Mr. Vorenberg: I do not think, as far as this particular exhibit is concerned, it would be any problem. However, this goes to the orderly presentation of our full case and we would not want by indicating that this particular exhibit could be held in abeyance to indicate that the rest of the case as it comes along could also be held in abeyance, because that just would not be possible.

Hearing Examiner Ewell: Do you contemplate submitting additional proof on another basis, that is, on the overall basis?

Mr. Vorenberg: Yes, we do, Mr. Hearing Examiner.

Hearing Examiner Ewell: Well, it seems to me it has some general relevancy.

Mr. Nowlin: You have the testimony by Mr. Hanson and Mr. Krause and counsel stated for the record they consider this a single integrated system so why put in evidence with respect to eight integrated systems? They contend they have one and in the second place, I have not had a chance to cross-examine on it and under no circum-

stances do I think it should go in before I have had a chance to cross-examine.

Mr. Vorenberg: Mr. Nowlin is prepared to concede it is a single integrated system?

Mr. Nowlin: I have made no concession. That is your position on the record.

Mr. Vorenberg: We offer this in effect that it could be one or more systems. We offer it for what effect it [1206] will have. It is part of a whole case that will show with clarity a picture that the Commission can then analyze.

Hearing Examiner Ewell: Mr. Nowlin, do you not contend that it is not possible that these companies might be sold individually?

Mr. Nowlin: Mr. Examiner, that has not a thing in the world to do with the matter before the Examiner today. The problem is to determine whether or not they have a single integrated gas system, and if there is a severance whether there is substantial loss. What the company does with these companies is no concern of this proceeding. This has no relevance whatsoever.

Hearing Examiner Ewell: Mr. Quarles?

Mr. Quarles: I was simply going to say this, sir. Conceding for the moment for this purpose only the validity of counsel's point, namely, that it is the present status that would determine and that should be used as a measuring stick. We do not know that the Commission will agree with us that this is a single integrated system. The Commission might very well say that the seven companies on one line constitute a single integrated system, and the one company on the other gas line is another system. It might, for some other reason say, that some other one individual company cannot be included in the integrated system. We cannot wait until we have had a determination of these issues by the Commission before going [1207] ahead with the rest of the evidence for the total case. It seems reasonable, therefore,

for us to present a breakdown showing what is the cost with respect to each of these companies. If it turns out that that company is a separate system the only one or another or two more, or whatever, it can do there is no possible harm. It is helpful on those theories and I submit it has some value in testing the validity of the losses that we would undertake to show for the eight combined when we present that evidence the early part of next week when we resume. So that on any theory it has some value to the Commission and on no theory can it prejudice anybody's position even accepting Mr. Nowlin's theory that you measure it not by what happens when we sell them but by what is the status of them today.

Hearing Examiner Ewell: Well, I do not think I can dispose of this thing at 5:30 on Friday night, when we are going to meet here again Monday. And I think I will pass it until Monday morning at 10 o'clock.

Mr. Vorenberg: May this witness be excused subject to later recalling?

Hearing Examiner Ewell: Yes, surely, and we will adjourn at this time.

(Whereupon, at 5:35 o'clock p.m. the hearing was adjourned to reconvene at 10 o'clock a.m., Monday, May 23, 1960.)

PROCEEDINGS

[1209] Hearing Examiner Ewell: All right, gentlemen. Let us resume.

Mr. Quarles: Mr. Hearing Officer, just before we adjourned Friday we had offered in evidence a summary of the insurance costs and there had been some discussion of its admissibility, and you reserved decision on it.

In discussing that exhibit and other testimony with respect to the losses resulting from the severance of the gas companies and then operating them as separate units

instead of as a single system, I d mentioned that our approach throughout has been tha he principal issue here is the loss of economies resulting m severance and since we did not know what was the sta s of the gas companies with respect to being one or two more systems, it was necessary for us to introduce evide ce that would show the results on various possible hypoth's.

And also I pointed out, I think that in addition to this one main issue there were certain her issues with respect to which we felt it necessary t ut in new evidence to enable the Commission to make fin ngs.

We thought that a normal app ach to this was to have a severance study that dealt wit he assumption that the gas companies would be operat as separate units, that we would go through that, put in the necessary evidence about it [1210] first, then put in idence as to the result if it were possible to consider all the eight gas companies as a single system.

So that then you would have t wo extremes and would have sufficient basis for consider any combination that the Commission might ultimately prove or find to be the present status.

Now, Mr. Nowlin has suggeste that we should be limited to a consideration of the losses severance on the assumption th would be a single system, or a si integrated system now and presumably would continue after severance. Or, I believe he said it was immater what happened to them later.

Even if we take that theory, seems to me that it is a reasonable approach to a stud of the losses for us to examine the individual compan first and then the com bination. If we went at it the r way and examined the combination first I am sure we ld want to buttress that study by an examination of the vidual companies so that

you would have a check and so that it would be possible for the Commission to determine the proper allocation as between the electric and the gas and see just how it worked out.

Hearing Examiner Ewell: Do you propose to introduce a similar exhibit regarding the additional costs of insurance on the basis of a single integrated gas system?

Mr. Quarles: We do, yes, sir.

[1211] Hearing Examiner Ewell: May I ask you this, Mr. Quarles: Do you think, though, this question of setting it up as you have as if each company were operated individually and separately after severance is a realistic approach or practical? As a practical matter, do you think that there is any real likelihood of that happening?

Mr. Quarles: I think it is very improbable. In fact, we need not even take into account the possibility of there being eight separate ones. I think it is entirely possible, however, that it might be found that one could not be combined with the other seven. We do not know which particular one or which particular two.

So, in order to cover that contingency, we must present a study for each one; so that if the Commission should decide that here is one that receives its supply of gas from a different source from the others and it should be treated as a separate unit, the information is in the record for passing on that and similarly with others.

Hearing Examiner Ewell: And your exhibit gives the increased cost as to each individual company—

Mr. Quarles: That is correct.

Hearing Examiner Ewell: —if so operated—

Mr. Quarles: That is correct.

Hearing Examiner Ewell: —that is separate.

Mr. Quarles: Yes, sir.

[1212] But now, coming now to Mr. Nowlin's legal suggestion which was that the first issue you hear anyhow is the

status of the gas companies in the present situation, whether they are now an integrated system or two or more systems.

If that is an issue and we understand that it is definitely an issue, there was a time when we had thought that perhaps Mr. Nowlin was prepared to concede that all of the eight gas companies constituted a single integrated system. He said Friday definitely that he was not making that concession. So we have now this issue and, in order to meet that issue which he insists is the first issue we must face, then it seems to me that it is essential that we produce these individual studies.

For that, I would simply refer to the definition of an integrated public utility system as applied to gas companies in Section 2(a)(29)(B), and I am quoting:

"As applied to gas utility companies a system consisting of one or more gas utility companies which are so located and related that substantial economies may be effectuated by being operated as a single coordinated system."

And then it goes on.

With respect to the geographical location in order to determine whether these companies are so located and related that substantial economies may be effectuated by their being [1213] operated together, we must make the individual studies, and presenting it as we have will enable the Commission to make that determination and then proceed with the other parts of the case.

So that, on no possible theory can I see that the evidence that we are introducing with respect to separate operations is irrelevant. In fact, on no possible theory can I see how it could be omitted. So I urge on you the acceptance of the exhibit with respect to which you reserved your decision.

Hearing Examiner Ewell: Have you any further comment, Mr. Nowlin?

Mr. Nowlin: Mr. Examiner, I think there is some merit

to what Mr. Quarles has said with respect to the studies. However, I have some doubt as to the emphasis that has been placed upon these individual companies because it would seem to me that there is no question but that what some of these companies could constitute a single integrated system.

I think the part that has disturbed me is that the Commission's notice and order for hearing directs that that should be the first thing that we take up, whether or not these gas utility companies constitute one or more integrated systems.

So far we have not approached that subject at all except through the testimony of a couple of witnesses who said they did constitute a single integrated system. But the evidence [1214] has not been directed to that issue or in support of those conclusions by the witnesses.

The evidence thus far has been directed entirely towards establishment, it seems to me like there are eight single integrated systems. To that extent I think the presentation of the case has been somewhat confusing.

I think there is something to the effect that if any two of these eight cannot be together, you have to give the loss on each individual company.

That, to me, is remotely impossible or unlikely, that we have taken up a lot of time addressing the testimony towards eight systems rather than towards the question as to whether or not they have one system.

In other words, their witnesses' testimony is they have a single system but the evidence has gone to show they have eight systems.

If the evidence had been first directed toward the fact that they had one system they could be operated as a single unit and with substantial economies being accomplished, then they could have buttressed that in the event there were any changes to constitute more than one system

and they would have the evidence to support the conclusion in respect of the eight companies.

The testimony so far just has not been addressed to the notice in the first order for hearing. I assume that [1215] they are going to get around to that sooner or later, that they are going to try to establish that this is a single system and that there would be substantial losses in relating that single system to the electric system.

So far we have not had any evidence to that effect.

Mr. Quarles: The evidence that is now being contested and a very substantial part of all the evidence that has been introduced thus far bears directly on the question of whether there are economies in operating these gas companies in conjunction with the electric system and in conjunction with each other.

Hearing Examiner Ewell: Maybe I did not understand it.

But I understood that was the thrust of all this testimony. I mean all of these losses of economies were directed toward showing that if they were split up these losses would occur.

Mr. Quarles: Which evidence is intended to meet both issues, the first issue that Mr. Nowlin submits as the first issue to be determined and, secondly, as to the losses resulting from a severance in connection with this particular proceeding.

As to the order in which it has been presented and the emphasis that has been placed, I think that any two lawyers are apt to differ in their opinions about emphasis and order, but when you get to the substance of the thing which is now the [1216] question before you, this evidence is clearly relevant and our position is that it is necessary and, further, our position is that if we had come in and said we want to get a determination of the present status of these gas companies and a decision on that before we go any further, which is inconsistent with the general pro-

cedure and practice in this kind of a case, but if that had been our approach we would have introduced evidence right along the line that we have been introducing and are now offering.

Mr. Nowlin: Mr. Examiner, I have not objected to any of these exhibits that have come in that reflect the actual operating and statistical information. The only objections I have put in so far, except as to the relevancy of some of those matters, that is the consolidated taxes and service company losses, and whether or not the electric system loses substantial economies. The other exhibits that come in show factual material that will enable the Commission to reach a judgment.

The objection I had here is to the exhibit which is now in question, Exhibit No. 89, which shows on its face that it is severance of total insurance cost of the individual companies before severance and after severance. There is no indication here as to whether what the impact would be on this system of these companies were kept collectively together. That is the issue which we are supposed to have taken up first.

[1217] On consolidated tax return, there is no evidence there as to what effect the tax situation would be on these companies considered collectively rather than separately.

Mr. Quarles said he is going to put the evidence in, and I assume this thing will unfold later on, but we have gotten so deep into the situation so far in respect to treating these companies individually that I suspect we might as well go ahead and let them complete their case on the basis that he is going to put in some evidence later to show the effect on these companies collectively.

Hearing Examiner Ewell: Are you withdrawing the objection, then?

Mr. Nowlin: No, sir, I would still think what we ought

to do is mark these exhibits for identification until such time as he has connected them with his principal case.

Hearing Examiner Ewell: Do you have any objection to that?

Mr. Quarles: We feel that it is already connected up. We feel that this evidence is relevant as it stands.

Hearing Examiner Ewell: I am convinced it is relevant. I think the objection goes to the weight of it. How much weight is to be given is a matter that is for the Commission to decide.

Mr. Nowlin: Mr. Examiner, it is quite obvious if you look at the exhibit here, if these companies constitute a single integrated gas utility company, this exhibit has no [1218] relevancy whatever. In other words, these increased insurance costs will not occur. Neither will the consolidated tax—

Hearing Examiner Ewell: The Commission is going to decide whether they are or not.

Mr. Nowlin: It all depends on what the ultimate outcome is, whether they are relevant or not. If the Commission right now would say this is a single integrated gas system, these insurances here would not have any relevance whatever. So they show the losses on individual company basis.

Hearing Examiner Ewell: Suppose, for example, the Commission did not decide that. Suppose the Commission decided they were not an integrated system.

Mr. Nowlin: That is quite possible. I say it is inconceivable—

Hearing Examiner Ewell: Then that evidence might become relevant.

Mr. Nowlin: It is inconceivable to me that the Commission would decide some one, two, three, or four or some of these companies—I do not know how many of them—

would not constitute an integrated system. On their face they meet the definition of location.

The question is whether or not they can be operated collectively so as to effectuate substantial economies. There has been nothing that I see put in here that could show [1219] that these companies could collectively be operated and obtain substantial economies from a joint operation.

Hearing Examiner Ewell: I cannot see any prejudice to you or to the Division in letting it come in. After all, if it is irrelevant it is irrelevant and can be disregarded. I see no harm in it.

Mr. Nowlin: On that basis, Mr. Examiner, we could throw Webster's dictionary in here and it would make no difference.

Hearing Examiner Ewell: That is not the point. It does not go that far. These people indicated that they strenuously urge that this evidence is part of their case. They want to consider it.

Mr. Nowlin: All I have simply done is ask that it be marked for identification and wait until the exhibit is connected up with the main issue in the proceeding. I have not objected to it coming in. I asked that it be marked for identification. I am not objecting to it coming in now.

Mr. Quarles: Following that through, I suppose, would mean that you could not determine whether it could be admitted until we have gotten a determination by the Commission as to what constitutes an integrated system, whether all of these or seven of them or just how they would fall into place, and it is difficult for me to see how the Commission can decide that question without knowing what would be the losses to the [1220] individual company.

Take Norwood Gas, for example. Conceivably the Commission might say that should not be included with the other seven. In considering whether or not it should be included with the other seven, one of the important elements

would be how much loss of economy would there be for Norwood if it were cut loose alone.

Assuming that the Commission should decide that the other seven constitute one integrated system and Norwood another, then it is material what losses would be incurred by Norwood.

The same would apply to Wachusett or to any of the others.

And so it is definitely material to the basic determinations in order to have this evidence before the Commission and, in the second place, as ordinary administrative procedure where you have several issues and where you are using this approach of deferring cross-examination putting in the entire case in advance, I think it is perfectly normal for us to put in the evidence that would be applicable on any one of two or three definitely possible theories. These are not imaginary theories. It is definitely possible that the Commission might consider that this should be split seven and one or in some other combination. In any event, we must be covered on our evidence.

Hearing Examiner Ewell: On that point, I think Mr. [1221] Nowlin, in the course of the argument on Friday, said that the Commission might even order that the stock be distributed to various stockholders.

Mr. Nowlin: No, Mr. Examiner.

My point there was if an order should be issued against these companies by the Commission—

Hearing Examiner Ewell: I thought you made that statement. Maybe I misunderstood.

Mr. Nowlin: I am trying to correct any misunderstanding you might have.

The Commission has held on numerous times that the selection of a method to achieve compliance with an order was primarily in the hands of the management. They had wide latitude. The Commission would not do that, I do

not think. For management to select one method of disposing of it would be obviously unfair to the stockholders or the consumers.

That is a matter that has not anything to do with the present procedure as to how they are to be disposed of or when they are to be disposed of.

The only problem is how to get the facts as to whether they have to be disposed of or they can be kept.

I pointed out there are two or three things that could be done.

If they had an order against all the companies they could probably transfer them to a holding company and [1222] distribute the stock of the holding company to their stockholders or sell the stock of the holding company.

I assume this, if they think this is a single integrated system of gas utility companies, they must think there are substantial economies to be effected by them being operated together. It would seem to follow, then, if they were to dispose of them separately they would be injuring themselves. They would be dissipated—what economies and what values each one had.

That is demonstrated by these insurance figures here on Exhibit 89.

I doubt seriously—I did not get a chance to ask the witness—but I doubt seriously that these insurance losses or increased costs, rather, would occur if these companies were transferred to a separate holding company. I would think they would probably get somewhat the same coverage they have now. I do not know.

It is also possible that these consolidated tax losses would not occur, at least in the amount that they have established here, if these companies were transferred to a single holding company, where they could file consolidated returns. That is the thing that makes the many imponder-

ables in considering these companies at this time individually.

I repeat again I did not object to the relevancy of these exhibits. I asked that it be marked for identification [1223] and held off for offering in evidence until a later period, until they had connected this case up on the subsequent testimony on the status of these eight companies.

Hearing Examiner Ewell: Do you have any objection to that, Mr. Quarles?

Mr. Quarles: I would urge on you, sir, this is the same question that keeps coming up time after time. It applies not only to the exhibit but also applies to the oral testimony in places and it is definitely relevant. I think we must all recognize that it is relevant to this question of the present status of the gas companies.

Hearing Examiner Ewell: I think it has some general relevance. I think the objection goes to the weight of the testimony.

In view of your position, I am going to—

Mr. Nowlin: Mr. Examiner, I have not objected to the weight. I objected to it being received in evidence at this time.

Hearing Examiner Ewell: He promised to connect it up and supply the other evidence that you think is more cogent.

Mr. Nowlin: Why is it so important to the company? Why is this so vitally important to the company that this get into evidence?

Hearing Examiner Ewell: Mr. Quarles will have to [1224] answer that question.

Mr. Quarles: We are undertaking to present a total situation with all of the necessary facts to enable the Commission to determine the several issues. It might be said that no one piece of evidence that is offered is relevant alone and in vacuo. It is all a part of one total picture.

There seems to be no particular reason for holding up parts of it as against the other when at least, in our opinion, it is clearly relevant on its face and when the time of it is not terribly important now, but it is, I think, orderly to have the exhibits received as they are offered if their relevance is admitted and I gather that Mr. Nowlin is not questioning the relevance of this.

We have assured him that we would present corresponding information with respect to losses that would be incurred if we assume all eight companies together.

He assumes that the losses would not be anything like this.

It is better to wait and see what the actual figures show on that.

The same is true with respect to the result of consolidated tax returns. There will be specific evidence and the people that present it will be available for cross-examination.

[1225] Mr. Nowlin: That is very important, Mr. Examiner, that you not put the staff at a considerable disadvantage.

In the first place, the evidence so far has not been responsive to the Commission's notice or order for hearing.

The witnesses have stated that this constitutes a single integrated system. If they put on that evidence in support of that contention and then come in and say, "We have made this further study in case the Commission does not agree with us here would be the impact on these companies separately"—we may never have gotten to that point—if they put on the evidence in response to the notice and order for hearing as to whether or not they constitute a single integrated system it may have been they would have established that where there would not be any contest about it, and we would have no need to go into individual companies.

In any event, we are at a disadvantage of letting evidence come in here with respect to these eight individual companies which, in our opinion, is almost inconceivable that some of these companies could not be kept together, and then we are going to hear the case later as to whether or not they constitute a single integrated system.

Mr. Quarles: I submit, sir, that you are right now hearing the case as to whether or not they constitute a single integrated system and neither you nor the Commission [1226] could reach a conclusion on that without knowing what losses would be realized by cutting them loose one by one. In other words, facing this very first issue of determining their present status under Section 2(a)(29) (B) requires examination whether or not each of these companies could be operated singly without substantial losses and what would be the losses. That is the whole thrust of our present evidence.

We did not in our statement as to the order of presentation say that we were coming at it in this way because, as I did say at that time, we regarded the other as the major issue and that was the thing toward which we were primarily directing our attention.

But our evidence has gone in in just the order that would have been necessary if we were looking to that first issue of the present status. We are trying to complete that evidence now.

Mr. Nowlin: I repeat again the only objection I have made is as to this coming in evidence at this time. I still think they are out of order.

It may be marked for identification, and I have not heard any real reason yet why the company has any objection marking them for identification and then offering them after they have established their case.

Hearing Examiner Ewell: I asked Mr. Quarles whether they had any objection and each time I thought he quite

[1227] strenuously objected. At least he argued at some length to show why it ought to come in now.

Mr. Quarles: It is as to your Honor's discretion when you rule on the offer.

It is our feeling that no useful purpose is served by deferring the admission of evidence that is admittedly relevant or is so clearly relevant that the only question is as to the weight that should be given.

Hearing Examiner Ewell: The thing that bothers me most is that you conceded that this question of separate operation of each company is not a very realistic one.

Mr. Quarles: Not as to all eight separately but, as to individual companies, I certainly have not intended to concede or give any suggestion of an impression that we regarded it as unrealistic. We think it would be entirely realistic to consider the possibility. But whether it is or not, sir, before you can get a determination by the Commission of that fact the Commission must have evidence in the record on which it can be determined whether or not each of these gas utility companies is so located and so related to the others that substantial economies may be effectuated by its being operated jointly with the others.

You have to do that with each individual company before the Commission can determine the issue as Mr. Nowlin assumes that they will determine it. We have to have it in the [1228] record or the Commission cannot make that determination.

Hearing Examiner Ewell: You have additional evidence to present today and tomorrow, do you not?

Mr. Quarles: Yes, sir.

Hearing Examiner Ewell: Why can we not go on with the balance of the testimony then, and keep this matter under advisement.

Mr. Quarles: We can go ahead without it.

I was hoping that we could have a determination of this issue now so it would not be raised every time a question is asked relating to individual operation because it runs through quite a bit of the testimony that has already come in and some that will be coming in in the future.

The ruling on this specific—

Hearing Examiner Ewell: I have already indicated I am practically convinced that it ought to come in. I would allow it.

But in view of Mr. Nowlin's strenuous objection I hesitate to make a definitive ruling until it is absolutely necessary. If you can go on with other matters, perhaps it will appear in a clearer light maybe from additional testimony.

Mr. Quarles: I have said what I have to say on the subject, sir. I shall certainly not further urge it at this time.

Hearing Examiner Ewell: All right. Let's proceed, [1229] then.

I might add that the reason I hesitate about making a definite ruling right now is the fact I have in mind that it might greatly extend the hearing. If testimony of this kind is admitted and it has only slight relevance it might require the staff to go into great deal of cross-examination and all that sort of thing.

Mr. Quarles: Yes, sir. It was our thought that it was not going to extend the hearing at all, the timing of it. And, in any event, this was essential both for the determination by the Commission of the present status, which is the first issue, also, while, as I have said, we would not expect the Commission not to be able to find that certain of these companies as presently constituted could be an integrated system, there is also the distinct possibility that, when they are disposed of, they would be disposed of one at a time.

Mr. Nowlin takes the position that what happens to

them after they are disposed of or in disposition is immaterial. We take the different view of that. We think that it is material, but for the time being, we are looking just at the question of the relevance of this testimony on the two broad issues; one, the definition under Section 2(a)(29)(B) and the other, the bearing that it has on the losses on various possible combinations or individual companies on severance. But we can go ahead to other matters as you have suggested.

[1230] Hearing Examiner Ewell: I would like to ask Mr. Nowlin how much of a burden it would be to the staff if this were admitted at this time.

I would just like to have your opinion as to whether or not that is part of your objection. In other words, that it would lead up a blind alley as it were.

Mr. Nowlin: I imagine, Mr. Examiner, Ebasco's report has much of the statistical information in there that apparently this is an Ebaseo study here that we are talking about, Exhibit No. 89—I imagine this whole report is couched in the same tenor.

The thing that I say would cause us concern is that we have not yet, after four days of hearings, come around to the issue in the proceeding: the first issue; that is, do these gas companies constitute a single integrated system? It may be if they approached the case from that viewpoint and established in the record evidence to support that, the staff might even concede that they had made a case, that these did constitute a single integrated system, therefore there would be no reason to take up the companies individually.

We did not have that opportunity and we have not yet an opportunity of determining whether or not they have established a case for the retention of these companies as a single integrated system or not. There has been no evidence directed towards that despite the fact that their two prin-

cipal witnesses, [1231] the chief executive officers, have testified in their opinion they constitute a single system.

Hearing Examiner Ewell: Even if they concede or you concede it constitutes a single system, would you not still be faced with the question of economic operation or loss of economies?

Mr. Nowlin: But you relate those losses of economies—if they constitute a single integrated system, Mr. Examiner, then the loss of economies would be the single integrated gas system against the single electric system and not eight individual companies. It would be very conceivable if they had gone and addressed their evidence to the issue—as I said, I do not know, because we have not the facts in the record—the staff might be willing to concede and, if necessary, join the company in requesting the Commission for statement of tentative views that they constitute a single integrated system.

As it is now, we have gone for four days and have not had the evidence directed toward the principal issue in the case. It is the initial issue.

Mr. Quarles: Mr. Hearing Officer, even at the expense of repetition, there are just two things I would like to say, very briefly.

The first one is that we regard the evidence that we are now discussing as being essential to the very issue that Mr. [1232] Nowlin proposes as the first issue of the case, and that it had to be put in whether or not the staff conceded because the Commission must have material to support its findings that presently the gas companies are a single integrated system.

The second thing I would say is that although Mr. Nowlin might have had a different idea of the order of presentation and perhaps it might have been better than ours we do think that there is no obligation on us to take up the several issues raised by the order of notice in any

particular order and that if we present the necessary evidence to cover all of the issues so that when it comes before the Commission it is in a position to deal with all of them, that the order in which it has been presented is a matter that in all fairness might be left to us and, in any event, is not harmful to anybody's position.

The staff is not in a position of having to pass judgment on any of these things or to undertake any cross-examination or to take any position until the whole case is in.

Unless there are unexpected delays, the whole affirmative case will be in by some time tomorrow.

Hearing Examiner Ewell: I think we ought to proceed.

Mr. Vorenberg: Mr. Cahal?

Hearing Examiner Ewell: I am still reserving decision on the question.

[1233] Mr. Vorenberg: Mr. Cahal has not previously appeared, Mr. Examiner.

[1234] Whereupon,

ROBERT ROSS CAHAL, JR.

was called as a witness and, having been first duly sworn, was examined and testified as follows:

Hearing Examiner Ewell: Your full name, please?

The Witness: Robert Ross Cahal, Jr., C-a-h-a-l.

Direct Examination

By Mr. Vorenberg:

Q. Please state your address, Mr. Cahal. A. 76 Maple Drive, Great Neck, New York.

Q. Would you state your business connection at the present time. A. I am a marketing consultant in the Sales, Marketing and Public Relations Department of Ebaseo Services, Incorporated.

Q. Mr. Cahal, please describe your educational and business background. A. I received a Bachelor of Business

Administration degree from Tulane University, New Orleans, Louisiana, in 1947, and a Master of Business Administration degree, majoring in marketing, in 1948 from Tulane. Subsequent to that I took post-graduate courses in marketing and public utility economics.

From 1948 to 1954 I was employed in the Sales Department of New Orleans Public Service Inc., a utility which serves the city of New Orleans, Louisiana, with electric, gas and transit service. For the first three years of my employment [1235] I was a residential sales representative. My duties included contacting residential customers to promote and sell electric and gas appliances and to handle service functions such as electric and gas service extensions, load analyses, bill inquiries, and the like.

After some 15 months of military service during the Korean War, I returned to New Orleans Public Service as a Sales Planner in the company's Sales Promotion Division. My duties in this position included sales planning, preparation of sales programs and campaigns, development of sales promotion materials and activities, sales training, market research, sales analysis, and area economic research. These duties covered residential, commercial, and industrial sales. I remained in this position until leaving New Orleans Public Service in 1954 to join Ebasco Services Inc.

Q. Would you describe your duties as a marketing consultant with Ebasco. A. I am one of a group of consultants providing advisory and investigative services to electric and gas utilities and to related enterprises throughout the United States and in other countries. The types of consulting work in which I have participated include: assistance to utilities in the planning and development of utility sales and customer relations programs; consultation on the preparation of sales promotional materials and activities; analysis and evaluation of sales [1236] results and

sales costs; planning, conducting and analyzing market surveys; evaluating markets for utility services as a basis for feasibility reports; forecasting electric and gas sales and revenues; analysis of utility sales organization structures and staffing; development and training of utility sales management personnel; and general economic studies.

Q. Are these functions performed on a regular, continuing basis? A. Yes, they are done continually for some twenty regular utility clients, and as special projects for other utilities and related enterprises, such as manufacturers of utilization equipment.

Q. And do these clients include both electric and gas utilities? A. Yes, electric, gas, and combination companies.

Q. Mr. Cahal, in the course of your duties have you worked closely with the electric and gas utility industries in general? A. Yes. I am a member of the Marketing Research Committee of the American Gas Association, the Sales Training and Personnel Committee of the Edison Electric Institute, and the Public Utilities Research Committee of the American Marketing Association. In addition, I am frequently requested to speak before electric and gas utility sales executives groups on subjects related to my fields of experience.

[1237] Q. Mr. Cahal, did you participate in the Ebasco studies of the effect of severance on the Massachusetts gas companies of the NEES system? A. Yes.

Q. Would you state your area of responsibility as a participant in the study. A. I was responsible for reviewing and evaluating the effects of severance on new business or sales functions as carried out in the individual companies, the NEES Gas Division, and NEPSCO, including sales objectives, activities, personnel, expenses, and results.

Q. Would you tell us briefly what you did in order to reach conclusions about the business development function

and the effects of severance on it. A. I visited the offices of the Gas Division and NEPSCO for the purpose of discussing the business development function with those who were responsible for the function at this level. I reviewed the organization and job descriptions of groups and personnel responsible for activities related to the business development function, in the Gas Division, NEPSCO, and the individual companies. I examined examples of advertising, sales plans and programs, and promotional materials. I analyzed statistical reports pertinent to sales results and sales costs.

Q. Did you actually visit the operating companies in [1238] the course of your investigation? A. Yes, I did. I visited all the gas companies—and the electric companies where they were operated in conjunction with the gas properties. This was done in order to view first-hand the sales operation and to interview personnel in these companies who were responsible for carrying out sales and business development activities.

Q. Were you the only Ebaseo consultant to participate in the business development aspects of the study? A. No, I made the study in conjunction with Mr. John H. Coates, Senior Sales Consultant, who also made field investigations and worked with me in analyzing and evaluating the data.

Q. Would you describe the business development activities as they were generally carried out by the gas companies. A. In general each gas company carried out its sales activities in a similar manner. Some variations among the companies existed, but these were due to differences in company size and market conditions, or to various local problems and situations. Perhaps it will be helpful if I describe the sales activities of North Shore Gas Company in a little detail as an example of the general pattern. Its sales operations were more or less typical of the gas companies generally.

Q. Did North Shore Gas and Merrimack-Essex Electric [1239] have any joint sales personnel or promotional activities? A. No, they did not. The sales or business development activities of North Shore were carried on completely separate independent from those of the Merrimack-Essex Electric Company. Personnel were completely separate, except of course for personnel involved in accounting functions which might have been incidental to the sales function. The sales representatives themselves promoted and sold only gas and gas appliances; the electric company representatives sold only electric appliances.

Q. How about the use of joint facilities for the display and sale of appliances? A. When the offices of the North Shore Gas Company and Merrimack-Essex were in the same building both use the main floor of the building for display and sales purposes, but these areas were segregated between electric and gas appliances. North Shore had five display floor locations. Three of those were operated jointly with Merrimack-Essex and two were devoted exclusively to gas operations.

Q. Was this the pattern that generally prevailed in the other companies of the Gas Division? A. Yes, although some of the companies had no all-gas sales floors, because all the areas served were also served by a related electric company. All told in the Gas Division there were 26 sales floors operated by the eight companies which serve gas, and 9 of these were devoted exclusively to [1240] the sale of gas appliances.

Q. Was there any evidence that NEES management was holding back or failing to encourage the sales promotion efforts of either the electric companies or gas companies through restrictive policies or in any other way? A. No—quite the contrary. I saw no evidence that there were any restraints related to the fact that both electric and gas companies were a part of the NEES System. In fact,

everything pointed in the opposite direction. Both from an organizational and a policy point of view every effort is made to encourage aggressive and independent sales activities by the gas and electric companies.

Q. Would you describe the new business activities of the North Shore Gas Company. A. New residential business was developed primarily through appliance merchandising activities of the company, although there was a planned program for developing appliance and equipment sales through independent dealers and plumbing and heating contractors and in new home construction. Commercial, industrial and other classes of business were developed primarily by promoting sales of utilization equipment through independent equipment distributors.

Q. You say that the company promoted residential sales through "merchandising". Would you explain what that involved. A. It means the company sold appliances to the public [1241] and carried on the functions necessary to effecting the sale successfully; carrying on inventory of appliances, promoting the sale of appliances, financing the purchase, seeing that the appliance was installed in the customer's home, and providing any necessary servicing of the appliance thereafter.

Q. Is it normal for a gas utility to merchandise? A. Yes, according to an AGA survey, over 70 per cent of gas companies in the country do merchandise, and in New England virtually all of the gas companies merchandised in 1958.

Q. How was the business development function staffed in the North Shore Gas Company? A. The sales program of the company was under the direction of the Assistant Manager of the company, who also functioned as Sales Manager. He was responsible for the program to develop domestic, commercial, and industrial sales. Under him were eight domestic salesmen who sold gas appliances to

residential customers and to dealers, plumbers and heating contractors for installation on residential premises. These included two domestic salesmen who also managed branch stores in addition to selling appliances.

In addition to these eight salesmen there were four other representatives concerned with residential market development: two house-heating specialists who supported the domestic salesmen in the more technical aspects of selling house heating; [1242] a builder representative who contacted home builders to stimulate the acceptance of gas equipment in new homes and housing developments; and a home economist who supplemented direct selling efforts by conducting demonstrations of appliances in customers' homes and before consumer groups for the company and for dealers.

Q. Were these all the sales contact representatives in North Shore? A. No. In addition to these that I mentioned, who contacted the residential market, the company also had two representatives who contacted commercial and industrial customers to promote the use of gas equipment and to provide advice on gas utilization problems. There were also four clerks and stenographers who served the new business function. The local manager at the Gloucester office served as Dealer Representative for the entire company in addition to this other duties. He handled the activities of the Dealer Cooperative Program.

Q. In your opinion was this a reasonable staff for a gas company of this size to maintain for new business development? A. Yes, it was a reasonable staff. In the first place the job titles and functions were typical of a merchandising gas utility. Because load building depended on appliance sales it was necessary that there be a number of salesmen devoting [1243] their time to specifically selling these appliances. Their effectiveness could be enhanced by supporting personnel, such as house-heating specialists and

home economists. Because of the extremely competitive nature of the house-heating market with favorably priced oil, it was essential that each house-heating prospect be approached with care, utilizing accurate estimating and sizing procedures. House-heating specialists had the knowledge and experience and could devote the time to ensuring that this care was taken. Builder representatives were necessary to cope with the special sales problems involved in the new home market. Home economists have proven their value in both gas and electric utilities across the country.

Q. Was the number of sales personnel utilized by North Shore reasonable? A. Yes. They were justified by the size and nature of the market in which the company operated. For example, there were eight domestic salesmen for 31,313 domestic customers, or approximately 4,000 customers per salesman. Based on our studies of other gas utilities, this ratio was quite reasonable. Other personnel ratios were well within reason when compared with other utility practices across the country. There was one home economist for 31,313 customers. Two representatives were handling 1,800 nonresidential customers, or about one representative for every 900 customers.

[1244] Q. How did these personnel ratios for North Shore compare with other companies in the Gas Division? A. In general they were typical. Naturally each company had its own situation and market conditions which created different personnel needs. The number of domestic salesmen ranged from one in Norwood to 25 in Mystic Valley, but the ratio of customers to domestic salesmen ranged only from 3,000 per salesman in Central Massachusetts to 4,100 in Norwood. The smaller companies, such as Norwood, Central Massachusetts and Wachusett, did not have representatives calling on commercial and industrial customers full time. Also, Northampton and Lawrence did not have

home economists on their new business staffs; Wachusett had one on a part-time basis.

In Wachusett, Northampton and Norwood there was no sales manager; in these three companies the Vice President and General Manager was also responsible for sales management.

Q. But the staffing in these seven other companies appeared reasonable? A. Yes. It is essential that the size and nature of these sales staffs of an individual gas company be tailored to meet local situations and market conditions. Therefore, some differences will always be present, but overall the companies were quite consistent.

Q. What sales promotion activities were carried on by [1245] North Shore? A. North Shore carried on a consistent and aggressive advertising program which utilized newspaper advertising, radio advertising, direct mail advertising, truck and ear cards and billboards. In addition, the Gas Division participated as a whole in advertising in Boston newspapers, through billboards, on radio and on television in cooperation with other gas companies in the Boston area. Also the Gas Division supported national advertising for gas and gas appliances in national magazines and network television carried out by the American Gas Association.

Q. How much did North Shore spend on advertising in 1958? A. Counting all company advertising in support of merchandising, promotion, and new business, and participation in AGA promotions and advertising, the company spent \$36,318.

Q. What other promotion activities did the company conduct? A. It maintained a series of sales campaigns for its own salesmen in which bonuses were given for sales of specific appliances featured in these campaigns. These bonuses were in addition to the regular salary and commission paid these salesmen. It had a builder program which

featured allowances and bonuses to home builders for installing gas appliances and financial support of advertising for these [1246] homes. It had an organized program of cooperation with independent appliance dealers, plumbers, and heating contractors which featured bonuses to these dealers and their salesmen for selling gas appliances, and financial support of advertising of gas appliances by the dealers. There were other promotional activities which were used to supplement and support the sales program, such as special displays and exhibits, consumer contests, and the like.

Q. Did your investigation enable you to draw any conclusions about these activities? A. Yes. They showed North Shore to be an aggressive, sales-minded gas utility. The examples of advertising that I saw were hard-hitting, gas-centered ads. The sales campaigns covered every possible application for gas in homes; heating, water heating, cooking, clothes drying, refrigeration, and incineration. They had good seasonal and load-building balance.

The promotion activities were aimed at stimulating consumer and sales ally interest in gas as the preferred household fuel as well as creating sales of appliances. Every element used by North Shore was a recognized, well-proven sales promotion device in the gas utility industry.

Q. Would you comment on the incentives which are provided to company and other salesmen. A. The incentive program used by North Shore and the other gas companies was characteristic of aggressive selling. [1247] A large component of the average salesman's annual earnings was gained by attaining incentive sales goals. On the average, only about a third of annual earnings came from salary; about a third came from commissions on sales volume; and the remaining third came from load building and sales bonuses. Also the type and amount of incentives given to sales allies for sales of gas appliances were indicative of an

aggressive sales effort. Allowances on installation were also offered to homeowners.

Q. You say that these incentives were characteristic of aggressive selling. Would you amplify that. A. I would be glad to. If a gas or electric utility wants to effectively develop the market for its services, it must be willing to invest wisely and adequately in that development. Allowances and incentives have been found by sales-minded utilities to be a prudent and effective way of adding load, when implemented by direct selling effort and supported by promotion and advertising. Sales-minded utilities who are in tough competitive situations have followed this course.

Q. Were the NEES gas companies' expenditures for advertising and sales promotion activities reasonable, in your opinion? A. They were.

Q. Mr. Cahal, did you observe any difference in the promotion of gas sales in areas where the NEES gas company [1248] was competing with a NEES electric company, compared to the promotion where NEES did not serve electricity? A. No, I did not. As I have pointed out, the promotional plans and activities were consistent throughout the system. Within the same gas service area which included a NEES electric service area and another company's or municipal service area, there was no noticeable difference. For example, Salem, Beverly and Gloucester in North Shore's service area, were served by Merrimack-Essex while Peabody and Danvers were served by municipal systems. North Shore maintained the same sales program, including allowances and incentives, and has basically the same coverage of salesmen in the Merrimack-Essex area as it did in the municipal areas.

Q. Were the sales promotion activities which you described developed and carried out by North Shore personnel? A. Not all of them. Some were carried out largely by North Shore, but the company depended heavily on the

Gas Division for sales and promotional assistance. As a rule those activities which required implementation by local manpower, such as the builder program, the dealer program, and home service activities were handled locally, but they were planned by the Gas Division.

Q. What sales assistance did the Gas Division provide to North Shore? A. Practically all of the sales planning was done by [1249] Gas Division personnel. This included the scheduling, planning and design of sales campaigns. It included the formulation of special sales programs, such as the ones for builders and dealers. The Gas Division personnel were largely responsible for the design of incentive plans, such as the bonuses paid to salesmen; the design and production of promotional materials; and the creation, production and placing of advertising, which was done largely through the Gas Division's advertising agency. The Gas Division handled the participation in regional and national advertising and promotion programs. The Gas Division coordinated group promotions, such as area-wide consumer contests. The Gas Division was responsible for testing and evaluating appliances and equipment which were to be sold by the gas companies.

Technical assistance on sales and utilization problems, such as advise on engineered applications to commercial and industrial customers, was given; as were advice and consultation on sales organization, staffing and management of sales personnel.

Gas Division personnel also prepared analyses of sales results and sales costs which permitted local management to evaluate the effectiveness and deficiencies in their local sales efforts.

Q. How were the advertising and sales promotion costs distributed among the companies? [1250] A. The agency billed each company directly. Space costs attendant to individual company newspaper and radio advertising were billed to the companies on the basis of actual costs of such

space or air time in the media used. Preparation and production costs were allocated in proportion to the cost of space. Cooperative advertising, such as that with the Boston area gas companies and AGA national advertising, was allocated to individual companies on the basis of customers.

Q. Did the NEES gas companies receive assistance from each other? A. The smaller gas companies relied on the larger ones, especially Mystic Valley, for assistance in dealing with special sales problems to large-use customers. For example, Mystic Valley's commercial and industrial sales section had personnel who were able to help in selling technical applications to large industrial or commercial customers.

Q. In your opinion, were the NEES gas companies' business development activities producing satisfactory results? A. Yes, they were, especially when results are considered in light of the competitive and market conditions which existed in the service areas.

Q. Would you describe these conditions. A. Yes, these companies serve a highly competitive area. [1251] The relative costs of gas and oil in the region were extremely close. Aggravating this situation in the several areas was the fact that the oil dealers were relatively large and they were well organized. As a result they could maintain a full-scale aggressive sales program to exploit their already dominant position in the house-heating market. Because of oil's entrenched position, new homes were the most attractive market for gas house heating. Generally the NEES gas areas were not blessed with much growth in new residential construction.

Looking again at North Shore, for example, Salem, which accounted for the largest number of meters, was an old community with practically no new growth. Gloucester was a stable community with a good proportion of seasonal

residents. Beverly, Peabody, and Danvers were growing but they were small in relation to the total company service area. The little residential growth that existed had been offset by the loss of residences in Salem due to the re-development of the inner part of the city. As a consequence, North Shore had not experienced any growth in number of customers, and future growth would appear rather small. Furthermore, there is no sizable industrial or commercial market potential.

Q. You said that sales results were satisfactory. What is the basis for this statement, referring first to North Shore by way of example? A. In spite of the competitive and market conditions, [1252] North Shore had managed to maintain a record of sales growth. In 1958 total Mcf sales were 14.6 per cent higher than they were in 1957. Increases were made in all segments of the market: domestic sales increased 16.2 per cent; commercial sales increased 13.8 per cent; and industrial sales increased 6.7 per cent.

Q. Has this sales record been maintained over the years? A. In general, sales had been increasing, although the annual percentage growth rates had not always matched those registered in 1958. One measure of growth could be found in average use per domestic customer. In 1952 the average annual use per domestic customer in North Shore's area was 14.5 Mcf. In 1958 average use was 32.2 Mcf. This change represented an average annual increase of 14.2 per cent between 1952 and 1958.

Q. How did this compare with other gas companies in Massachusetts? A. The percentage increase was higher than for Massachusetts and New England as a whole. The annual percentage increase in average use between 1952 and 1958 in Massachusetts averaged 13.4 per cent, and in New England 13.5 per cent. And North Shore's rate of increase compared more favorably with increases attained in the metropolitan area of Boston.

Q. How did other companies in the Gas Division compare [1253] with these 1952-1958 increases in average use per customer? A. Five of them were well above Massachusetts and New England growth rates. Mystic Valley and Lynn were below. The Gas Division as a whole averaged 13.7 per cent per year.

Q. Did you note any other indicator of adequate sales results for North Shore? A. Yes, it is important to compare sales results with the costs of achieving these results. In 1958, North Shore's total sales expense equalled \$6.19 per customer. Based on sales of appliances and equipment to all customers, the company estimated that it added \$10.98 of annual revenue for each customer through these sales activities. This meant that it was able to bring in \$1.77 of annual revenue for each dollar of sales expense.

A general rule-of-thumb in the utility industry is that one dollar of sales expense should produce at least one dollar of annual revenue, so a ratio of \$1.77 was quite reasonable. All the other gas companies in the Gas Division maintained their ratios well above one to one.

Q. Did you analyze the effects of severance on the new business aspects of the gas operation? A. Yes.

Q. What would be the effect of severance on the sales efforts of the gas companies? A. Present sales efforts would be little changed by [1254] the severance of the gas companies from the NEES system.

Q. What is the reason for this opinion? A. In establishing the pro forma sales organization we endeavored to maintain the same kind of aggressive sales effort that characterized the former organization. The gas companies had and have complete freedom in sales activities. They can and do promote any application for gas service aggressively. There is not the slightest indication that their sales efforts are restricted other than by the limitations of sound sales and marketing practice.

Furthermore, results will depend more on market conditions than on the conditions of severance. Because of the conditions of the market, the gas companies are primarily concerned with the market for space heating as a source of future load growth.

In the areas served by NEES gas companies it was estimated that more than 75 per cent of the ranges and 50 per cent of the water heaters were gas, but gas served no more than an estimated 20 per cent of the house heating installations. Therefore, the greatest potential for further sales increases lay in acquiring a greater share of the house heating market where gas competed primarily with oil.

Q. Are these the only factors to consider in appraising the effects of severance on sales results? A. No. Results may be actually hurt by severance [1255] because the small independent gas companies would not be able to develop and carry out for themselves the kind of sales effort that is presently being developed.

Q. You have testified that the sales operations of the local electric and gas companies were carried on independently of one another. A. Yes, that is correct.

Q. Then would the number of personnel be essentially the same after severance as it was in 1958? A. This is correct as far as field and clerical personnel are concerned. Their number and function would be essentially unchanged. But the individual companies would have to provide for themselves some of the sales planning and promotion services which were provided by the Gas Division.

Q. What kind of personnel would be required? A. It would vary with the size of the company. In the case of the North Shore, for example, it would mean having a full-time sales manager rather than the services of the assistant manager. This sales manager would have to have much broader responsibilities and scope than at present.

Q. What would this mean in terms of cost to North Shore?

A. It would mean very little more since most of the sales manager's salary would be offset by eliminating allocations to new business development of salaries in the Gas Division and of company personnel who charged part of their time to new [1256] business.

Q. Therefore, the costs of maintaining the new business development activities under the pro forma set-up would be only slightly higher than it was in 1958? A. Yes, but this assumes that in the area of sales promotion materials and advertising the company would not increase its expenditures for advertising and sales promotion which it would have to do to maintain the same caliber and amount of advertising it used.

Q. Would you explain why it would have to increase its advertising expenses to maintain the present caliber?

A. Most of the sales promotion materials and advertising were designed, produced, and, in the case of advertising placed by the Gas Division for the individual companies largely through the advertising agency. The economics of sales promotion and advertising production are such that a given amount of such material can be produced almost as cheaply for a group as it can for one individual company. This is because the bulk of the costs are in designing the material and preparing it for production. Once this has been done for one company, the additional costs of producing material for more companies is quite nominal.

Q. Would you give us an example? A. If it cost \$11,000 to prepare and produce newspaper mats for eight companies during the year, it would cost [1257] approximately \$10,500 to produce the same advertising for one company alone. The difference of \$500 being the cost of producing additional mats.

Q. Would a small independent gas company be able to afford such an expenditure? A. No, and among these companies, none—except perhaps Mystic Valley—could justify

having an advertising agency for the amount they could spend.

Q. Would this affect the quality of the advertising produced? A. Naturally it would. No one company could afford to have an advertising specialist or personnel with skills in advertising such as can be found in an agency, or in the advertising department of a large utility.

Q. Would this apply to other services provided by the Gas Division? A. Yes, it would apply to such important functions as sales programming, sales analyses and research, appliance testing, and the market analysis. These are the kind of functions that are beyond the reach of small companies. Perhaps, even more important, although less tangible, is the important role of leadership played by the Gas Division.

By coordinating the several companies into one team and providing that group with new promotion ideas, the Gas Division can inject a quality of aggressiveness into the sales [1258] effort. This in turn can produce a sustained and consistent promotional effort which is essential to continued sales growth.

Also, the Gas Division can keep full time surveillance over the sales program, measuring progress and noting deficiencies. Under a severed set-up, it is unlikely that the officer responsible for sales promotion would, along with his other duties, have the time to do the detailed planning and analysis that the present set-up affords each company.

Q. Are there any other aspects of severance on which you would like to comment? A. There is one. It is an accepted fact that when a utility is forced to economize that sales promotion expenses are the first to feel the pinch. This is not usually the wisest step to take, but it happens because sales promotion is thought to be, mistakenly in my opinion, expendable, and can be cut back without affecting services immediately. If, because of severance these gas

companies were forced to curtail operating expenses, it is likely that sales promotion expenses would be cut back first and the long-term financial integrity of the companies would be jeopardized by inadequate revenue growth.

Q. Mr. Cahal, you have discussed at some length the business development functions in the gas companies and the effect of severance thereupon. You indicated that you also investigated the business development functions of NEPSCO and the affected electric companies. You have shown that the gas [1259] companies' position as part of the NEES system imposes no limitation on its promotional program. Just so the record will be clear as to whether the same is true as far as electric sales promotion is concerned, would you summarize your findings of this investigation?

Mr. Nowlin: Mr. Examiner, I am going to object to that on the grounds that the impact on the electric system is not relevant to the issues in this proceeding.

Hearing Examiner Ewell: Read the question please.

(The question was read by the reporter.)

Hearing Examiner Ewell: What do you say to that?

Mr. Vorenberg: I am not clear in my mind as to the basis of Mr. Nowlin's objection.

If his objection is based on the assumption that we are trying here to show loss of economies to the electric side, that is not the purpose of my question.

If it were, I understand that we had a ruling on that last week.

The purpose of this question is: As I understand it, one of the purposes of Public Utility Holding Company Act was to avoid the problems of the sales efforts of one part of the utility business being sacrificed or played down for the benefit of the other. We have tried to present through Mr. Cahal's testimony and through the testimony of others the picture on the gas side, the gas promotional activities [1260] are completely independent.

It seems to me quite relevant to show, and we do not intend to do more than get this into the record and move on, that the same is true on the electric side, that the electric sales promotion activities are not playing second fiddle to the gas. It seems to me a small point but one that should be clear for the record.

Mr. Nowlin: That is the purpose of the question, then I have no objection.

As I understood the question, again, it is an attempt to show there is an adverse effect on the electric system.

Hearing Examiner Ewell: He said that is the purpose. So I think we ought to accept it.

I will allow it.

Mr. Vorenberg: That is the purpose, your Honor, of the question.

Mr. Nowlin: I will withdraw my objection to this question.

The Witness: Yes, the electric companies in the NEES system had a common approach to business development, that is, the sales activities of each one were similar in methods, policies and practices to the others. The planning, programming, and the preparation of promotional support was handled by the sales staff of NEPSCO. The implementations [1261] of the plans and programs was in the hands of the individual companies.

[1262] New residential business was developed primarily through appliance merchandising with additional emphasis on getting acceptance for electrical appliances in new homes using builder contact representatives.

Commercial and industrial classes of business were developed primarily by promoting sales of utilization equipment through independent equipment distributors. Because of the nature of the market the electrical companies placed more emphasis on the non-residential market than did the gas companies. This was probably the major difference

between the two sales organizations. Staffing and promotional support were comparable.

Q. You have testified that the gas sales program was not restricted by the gas companies' relationship to the NEES electric companies. Was there any indication that electric sales development was restrained by their association with the gas companies? A. No. On the contrary. The electric companies were pursuing a sales program and utilizing promotional methods that were characteristic of straight electric utilities.

For example, in their promotional programs the companies emphasized those domestic load building applications which are directly competitive with gas, namely cooking, water heating, and clothes dryers. In 1958, the [1263] NEES electric companies began to promote the all-electric home which includes electric space heating, in short, a home without any other fuel or energy source but electricity.

Furthermore, NEES, like many other electric companies has put in a rate aimed at developing the market for electric space heating. Other electric companies in Massachusetts which serve in or are contiguous to NEES gas service areas, such as Boston Edison and Western Massachusetts Electric Company, have put in promotional rates for electric space heating.

Mr. Nowlin: Would you mind explaining what you mean by electric space heating?

The Witness: There are several types of equipment used, but basically it means to heat the house with electricity. There is no other source of fuel.

Mr. Nowlin: Does that mean the heat pump?

The Witness: That does not apply too much in the north. It is mostly baseboard heating, with heat by radiant heat from wall units and baseboard units.

Mr. Nowlin: Thank you.

By Mr. Vorenberg:

Q. Mr. Cahal, I assume from what you said that gas severance would have no affect on the business development activities of the electric companies.

[1264] A. That is right. None at all. The activities, as I have mentioned, are completely separate. The NEPSCO sales staff charges only a negligible amount of time to Gas Companies; therefore there would be no personnel affected and practically no expense to be absorbed by the electric companies.

Q. Mr. Cahal, would you briefly summarize your conclusions about the business development function and the effects of severance on it. A. Yes. The business development functions of the electric and gas companies were completely independent and separate from one another. There appeared to be no restraint on the sales activities of either due to their corporate relationship. The sales activities of each were conducted in a manner characteristic of "straight" gas and electric companies. The staff and expenditures of the business development functions were adequate and reasonable in light of sound utility practice.

Furthermore the new business results being attained were satisfactory in view of the highly competitive nature of the service areas.

It can also be concluded that sales results would not be improved by gas severance, because sales activities are already separate, both gas and electric companies were taking reasonable measures to develop their [1265] markets.

On the other hand, the small independent gas company would not be able to apply the same specialized skills to sales development as the coordinated pool of resources now affords. While the impact of this might not manifest itself immediately, it would be bound to affect the long-term sales outlook of these companies. Especially since they would

be facing the well organized sales effort of a large electric system just beginning to gain momentum for the all-electric living concept.

Mr. Vorenberg: Your Honor, I have no further questions from Mr. Cahal, and request that he be excused subject to recall at a later time.

Hearing Examiner Ewell: Very well.

Do you have any clarifying questions at this time, Mr. Nowlin?

Mr. Nowlin: Mr. Cahal, I think in the course of your direct testimony you spoke of electric companies promoting sales of the NEES system. What electric companies did you have in mind?

The Witness: Within the NEES system or without?

Mr. Nowlin: The companies—as I understand it, you said some of the electric companies in the NEES system are promoting space heating.

The Witness: All of them are promoting electric [1266] space heating.

Mr. Nowlin: Do they have any special rates for electric space heating?

The Witness: They recently had a rate approved for consideration in the use of electric space heating.

Mr. Nowlin: Is the rate the same for all the electric companies?

The Witness: I am not sure. I don't know.

Mr. Nowlin: Do you know how many installations have been made?

The Witness: I have seen the figure. I don't know whether I can recall it accurately or not. I would say there might—on the NEES lines there probably would be two or three hundred. That is trying to recall the figure that I have available to me.

Hearing Examiner Ewell: Are the rates competitive with gas?

The Witness: Well, it depends on how you look at it. I would say they aren't directly competitive on a cost basis. However, there are a lot of factors that have entered into this, where the electric utilities by and large have approached this problem with a very careful engineering of the system. Therefore, they have, for example, put in more insulation than you would ordinarily find in a conventional system. In this way, they have [1267] reduced the total cost of heating the house to a position where, if it is not strictly competitive, cost-wise, at least it puts it in the realm of what they choose to call cadillac heating. That is, that some people would pay more for this different type of heating.

Mr. Nowlin: As I understand it, then, the development of the electric space heating is fairly new?

The Witness: It is fairly new in the northeast, particularly. Electric space heating, including heat pumps, have been installed for some years, and in certain areas of the country, where electric rates have been traditionally low, such as in the Pacific Northwest, where the rate situation is greatly different, they have had—those companies out there have had maybe 10 or 12 percent of their customers using electric space heating for many years. In some areas it goes even higher than that.

Mr. Nowlin: That is all I have, Mr. Examiner.

Hearing Examiner Ewell: All right. The witness is excused subject to recall.

(Witness temporarily excused.)

Mr. Quarles: Mr. Examiner, would this be a good time for a short recess?

Hearing Examiner Ewell: I believe so, yes.

(Brief recess)

[1268] Hearing Examiner Ewell: The hearing will be in order.

Mr. Vorenberg: Mr. Johnson.

Mr. Johnson has not previously appeared, Your Honor.

Whereupon,

THOMAS J. JOHNSON, JR.

was called as a witness and, after being first duly sworn, was examined and testified as follows:

Hearing Examiner Ewell: Your full name, sir?

The Witness: Thomas J. Johnson, Jr.

Direct Examination

By Mr. Vorenberg:

Q. Mr. Johnson, would you state your business address?

A. My name is Thomas J. Johnson, Jr. My business address is 2 Rector Street, New York.

Q. Would you state your business connection at the present time? A. I am Assistant Manager of the Accounting and Management Control Department of Ebasco Services Incorporated.

Q. What is your educational background? A. In 1939 I received a Bachelor of Science degree in Business Administration from Louisiana State University.

Q. Will you please state your business experience? A. From 1939 to 1952 I was employed by the Public [1269] Service Electric and Gas Company of Newark, New Jersey. I was employed by Public Service in 1939 for a two and one half year training program which covered all phases of utility operations. Upon completion of the training course I performed various work assignments in the general office of the company and was progressively promoted until I became the Assistant Manager of the Elizabeth, New Jersey commercial office. In this position I was responsible for accounting, sales and customer activities in an area serving approximately 125,000 customers. From 1941 to 1945 I was a member of the Armed Forces. I enlisted in

grade of private and was released from active duty in grade of Major in the Finance Department U.S. Army. I served both in this country and overseas.

In 1953 I was employed by Ebasco Services Incorporated in the Accounting and Management Control Department. Progressively I have been a Consultant, Senior Consultant, Principal Accounting Consultant and recently promoted to Assistant Manager of the Accounting and Management Control Department. During my employment with Ebasco I have been engaged primarily with electric and gas utilities in all phases of treasury and accounting work.

Recent assignments have included planning and supervising the reorganization of all customer billing and accounting, customer service, and credit and collection [1270] functions and procedures for a large metropolitan utility; installation and mechanization of customer and general accounting systems for a medium sized natural gas company; design and installation of accounting procedures for newly organized natural gas companies; development of organization, installation of accounting procedures and training of accounting personnel for foreign utility; and review of commercial activities for improvements of a large decentralized eastern utility.

In my present position I am responsible for planning, coordinating and reviewing the work of staff members of the Accounting and Management Control Department.

Q. Mr. Johnson, did you participate in the study of the effect of severance of the Massachusetts gas companies from the NEES System? A. Yes, I did.

Q. What was your part in the study? A. It was my responsibility to analyze the treasury and accounting organization and its policies, practices and procedures; to determine the effect severance would have on the existing treasury and accounting organization; and to study the

accounting organizational requirements of the gas and electric companies in the event of severance.

Q. How did you go about your work? A. Initially I studied the NEES System organization, [1271] including NEES itself, NEPSCO., the Gas Division, and the affiliated electric and gas operating companies. During the course of this phase of my work I made several field trips during which I studied the treasury and accounting organization and functions and became generally familiar with the methods of operation, procedures, facilities and personnel requirements.

Q. After obtaining this background, how did you then proceed? A. I requested and obtained all data necessary to properly analyze the treasury and accounting organization and functions as they were being conducted as of January 1, 1959.

Q. Could you please tell us the type of data you obtained? A. Yes. It included information concerning existing personnel requirements, payroll analyses, union contracts, job titles, job duties, salary scales, accounting policies, procedures and instructions, combination electric and gas accounting activities, number and locations of field accounting offices and their functions, and other related material.

I asked for and received certain customer accounting statistical data concerning number of customers served, customer bills, meters in service, meter reading, [1272] customer orders, customer payments, field and telephone collection calls, security deposits handled and other related data.

Data concerning general and stores accounting included: number of accounts payable vouchers, journal vouchers transportation tickets, material issue receipts, materials received reports, work orders issued, weekly time sheets, monthly time sheets, labor distribution items, periodic operating and financial reports, reports to regulatory

bodies and other related general and stores accounting activities.

Q. What did you do with this data? A. First I studied and analyzed the data to familiarize myself with the NEES System operations and determine if, in my opinion, the work was carried on effectively. Extent of combination of electric and gas activities, work volumes, union agreements, number of field locations, methods of operation and other related data were reviewed for this purpose as well as for the guidance they would provide in considering the treasury and accounting organizational structures which would be necessary for the independent gas companies in the event of severance. Also this data was essential in determining the effect on personnel requirements of affiliated electric companies affected by elimination of the combination electric and gas activities.

[1273] Q. Other than collect and analyze this data, what else did you do? A. Again I went to the field accounting offices and studied and analyzed the work. During these visits I discussed procedures, job duties and work performance with administrative and supervisory personnel and frequently discussed job duties with employees.

Often I requested and obtained additional information other than that initially requested. During these observations and discussions I paid particular attention to combination electric and gas accounting activities. In the process I also satisfied myself that the information initially submitted to me was correct.

Frequently I discussed the possibility of severance with administrative and supervisory personnel and obtained their views as to the impact this would have on personnel requirements. The information received from these discussions was valuable since the administrative and supervisory personnel had many years of service in the NEES System and were thoroughly familiar with the area served

and the detail of the accounting functions as well as the work performance of employees under their supervision.

Q. Now then, Mr. Johnson, would you please tell us how the local treasury and accounting functions were [1274] organized? A. As of January 1, 1959, the local treasury and accounting organization was divided into six districts. Each district was under the general supervision of a Treasurer or an Assistant Treasurer. These officers were referred to as Treasury Representatives. The Treasury Representatives were responsible to the Treasurer. Each of the six treasury districts maintained headquarters at a central point convenient to the affiliated companies under their respective jurisdiction.

The local treasury and accounting organizations were responsible for general, customer and stores accounting activities for the affiliated gas or electric companies in their areas. Personnel assigned to the various treasury districts, performed the general, customer and stores accounting work for the electric and gas companies of the NEES System.

Mr. Hanson, who was Treasurer of all affiliates excepting Lynn Gas and Electric Company, Narragansett Electric Company, Mystic Power Company and Granite State Electric Company, was responsible for temporary and permanent financing, relationships with security holders and dealers, special accounting problems and studies, systems and methods activities, internal auditing, tax and insurance matters and other related activities.

The New England Power Service Company provided [1275] assistance in carrying out these functions. Mr. Hanson also had the benefit of advice from other top NEES management. Services of NEPSCO were billed to the affiliated companies at cost. The NEES advice was given without charge.

Payroll costs of personnel of the district treasury organ-

izations were allocated to the respective affiliated companies based on work load. The work load was determined by an analysis of the number of customers served, gross revenue, number of meters or other appropriate basis. For the most part, these personnel were assigned as full, and in some cases, as part time employees of the affiliated companies. In some instances, the companies billed each other for services performed.

Q. You mentioned that there were six district treasury organizations. Did you investigate each of these organization? A. Yes, I investigated all six districts but found that only four of the districts involved the eight Massachusetts gas companies in the severance study. I therefore concentrated my work on these four districts.

Q. What districts were they? A. The Central District, which was under the supervision of the Assistant Treasurer based at Worcester. This district performed the accounting work for Worcester County Electric Company, Northampton Electric Lighting Company, [1276] Northern Berkshire Electric Company, Southern Berkshire Power & Electric Company, Central Massachusetts Gas Company, Northampton Gas Light Company and Wachusett Gas Company.

The second district, known as the Northeastern District, was under the supervision of an Assistant Treasurer based at Malden. The affiliated companies in this district included Merrimack-Essex Electric Company, Suburban Electric Company, Lawrence Gas Company, Mystic Valley Gas Company and North Shore Gas Company.

A third district called the Southeastern District Treasury Organization was under the supervision of an Assistant Treasurer, based at Quincy and included Quincy Electric Company, Weymouth Light and Power Company and Norwood Gas Company.

The fourth district served the Lynn area and was under the supervision of the Treasurer of Lynn, who was located

in Lynn. This district served the Lynn Gas and Electric Company. I think I should mention that the Lynn District was rather different from the other districts in that it served a combination electric and gas utility. Lynn Gas and Electric Company had been recently acquired by the NEES System and therefore the treasury and accounting activities had not been fully absorbed into the NEES System.

Q. How did these treasury districts function? A. Personnel of the various districts performed the [1277] general, customer and stores accounting functions for the affiliated companies within their respective district.

Q. What did these accounting functions consist of? A. The general accounting functions included maintenance of detailed and general ledgers, payroll, stores accounting, construction and plant accounting, accounts payable, preparation of periodic financial and operating reports for management and regulatory bodies, and other related activities. Customer accounting functions included meter reading, customer billing, customer accounting, cashiering, credit and collection work, customer service, customer relations and other related activities. Stores activities included the issuance and receipt of stores items, pricing and maintenance of inventory control records.

Q. Were these accounting functions performed on a joint or combination basis among the affiliated electric and gas companies? A. Yes, to a large extent they were. The District Treasury Organizations provided joint administration and supervision over general, customer and stores accounting activities for both electric and gas companies in many areas. In common areas, served by affiliated gas and electric companies, practically all customer accounting functions were done on a joint basis. They included meter reading, accounts receivable, cashiering, customer service, customer [1278] relations and credit and collection work.

Customer billing was done in several different ways depending upon volume and location of the company. Some of the companies used punched card equipment at a centralized machine installation. Others used key driven equipment at a centralized customer billing center. Some of the smaller companies performed their own billing in the field. The same customer bill addressing media, regardless of whether it was an addressograph plate or punched card, was used to address customer gas and electric bills.

Customer Accounts Receivable Records were maintained jointly at field officers where electric and gas was served in a common area by affiliated companies. Meter reading, service location, customer credit history, and other customer records were also maintained on a combination basis in the field locations serving both electric and gas in a common area.

Q. Mr. Johnson, would you please describe in greater detail the methods used to prepare customer bills? A. Yes. Residential and small commercial and industrial accounts, both electric and gas, were billed bi-monthly. Large commercial and industrial electric and gas accounts were billed monthly. Residential gas heating customers were encouraged to use the budget plan method of payment and given a coupon book to make monthly payments. [1279] Their bimonthly bill was then in effect simply a statement of gas service used and showed the status of the account. By status, I mean the debit or credit balance and current usage.

Residential gas heating customers that were not on the budget plan received service bills bimonthly. Mystic Valley Gas Company customer bills were prepared on punched card equipment at the machine center in Malden. This center also prepared customer bills for North Shore Gas Company, Suburban Electric Company and those bills of Merrimack-Essex Electric in the Beverly-Salem and

Gloucester areas which were also served gas by North Shore Gas Company. Separate electric and separate gas bills were prepared for all customers. Lawrence Gas Company bills were prepared on key driven equipment at Lawrence. Merrimack-Essex Electric customer bills for customers in the common area of Lawrence Gas were also prepared on key driven equipment at Lawrence.

Central Massachusetts Gas Company, Wachusett Gas Company and Worcester County Electric Company customer bills were prepared in Worcester at a centralized billing center utilizing key driven equipment. Northampton Gas Light Company and Northampton Electric Lighting Company prepared customer bills on key driven equipment at Northampton.

Norwood Gas Company prepared its bills on key [1280] driven equipment at Norwood. Lynn Gas and Electric Company prepared its customer gas and electric bills on punched card equipment at Lynn.

Since Lynn was a combination company at the time of our study, a single bill was prepared for customers using both electric and gas service. Because of its recent acquisition meters were read and billed monthly.

Q. During the course of your work, did you observe operations at these various centers? A. Yes. During my work I not only observed the work but also made an analysis of the work performed and discussed the operations with supervisory and clerical personnel. This was true of not only the billing operation but of all accounting activities of the gas companies as well as those of the affiliated electric companies doing work on a joint or combination basis with affiliated gas companies.

Q. Mr. Johnson, you have told us about the joint use of billing centers to prepare customers bills. Will you now please tell us of any other customer accounting and related activities that were done on a joint or combination basis?

A. Yes. Electric and gas meters were read on a combination basis for electric and gas affiliates serving in a common area. Also, customer service order work, credit and collection work, cashiering, customer accounting and [1281] other related work were performed in a similar manner.

Q. Will you please explain the nature of this combination effort in greater detail? A. Certainly. As I mentioned, gas and electric meters were read on a combination basis. By this I mean the meters of a customer using both services were read at the same time by one Meter Reader. One meter reading sheet was used to record both the electric and gas meter reading. Customer requests to establish or discontinue the use of gas or electric service were handled by one employee with a single order form. Customer payment facilities, in field offices, provided for payment of both electric and gas bills. Collection activities for delinquent accounts were performed on a combination basis. Accounts Receivable records for both electric and gas accounts were maintained by one employee. Accounting control numbers and customer account numbers for a combination electric and gas customer were one and the same.

Q. In your opinion, were there advantages to these combination or joint operations by the electric and gas companies? A. Yes, there were several and they were substantial. Briefly, this arrangement offered economies in cost of operation and convenience to customers.

Q. Would you please explain this a little further? [1282]
A. Yes. As the severance study shows, there were major economies that represented considerable dollar savings, made possible by these joint electric and gas activities. Manpower requirements were substantially reduced in comparison to a single operation. Cost of transportation, office space and facilities and other related items were materially lower than if the activities were performed in-

dependently by the electric and gas affiliates. There were several examples of benefits of this combination activity.

A Meter Reader would call at a customer's home once to read both the electric and gas meters rather than having two men call to read the meters separately. This was a convenience to the customer and a minimum use of manpower for the company. Customers paid their bills at a single office or frequently mailed their payments with one check in one envelope for both electric and gas service.

Customer requests to establish or discontinue both electric and gas service were completed with one telephone call, one personal visit to one office or the mailing of one letter. Customers orders for both services were executed by one serviceman making one call at the customer's premises. Customer billing inquiries concerning both services were answered by one employee with a single telephone call, in person visit or letter. Delinquent [1283] electric and gas accounts were collected, arrangements for payments made, or service discontinued by one field call.

Q. Continuing with customer accounting and related activities, would you please tell us if in your opinion these functions were carried on efficiently and in an economical manner? A. Yes, they definitely were.

An analysis of reports, submitted to the Department of Public Utilities of Massachusetts, of twelve Massachusetts gas companies, none of which were affiliated with the NEES System and 10 of which provided gas service only showed the average commercial costs per customer, during the year 1958 to be \$6.37.

[1284] This compared to \$4.69 per customer for the 8 NEES gas companies, and indicated that the NEES System customer accounting policies, practices and procedures could be very favorably compared to other Massachusetts gas companies. My discussions with supervisory and clerical personnel indicated to me that the procedures were well

planned and functioned with minimum clerical effort. This was evidenced by the simplicity of the meter reading record sheet which served a four year period for combination electric and gas accounts. A permanent customer history record used for credit and collection purposes, a permanent service location and customer record used to establish and discontinue service and the use of other similar combination forms resulted in a minimum of transcribing work and a reduction in clerical effort. The number of accounting controls were confined to adequate workable minimums to avoid additional clerical manhours. The organization of the treasury districts provided for common administration, supervision and specialized accounting personnel for both electric and gas affiliates. This resulted in qualified and experienced administrative and supervisory personnel, utilizing minimum staffing requirements. The use of this specialized personnel resulted in better work performance.

Q. Mr. Johnson, you have discussed the combination electric and gas customer accounting activities. Now would [1285] you please tell us how the general accounting activities were conducted? A. General accounting activities were done on a combination basis by the affiliated electric and gas companies. The degree of combination was not as extensive as I found in customer accounting activities. The primary reason for this, of course, was the nature of the work. Nevertheless, the combination general accounting work was, in my opinion, significant from the point of view of economy and efficiency in accomplishing the work.

Q. What were your reasons for this conclusion?
A. There were several. They included the joint use of administrative and supervisory personnel, the degree of specialization of accounting personnel as well as the ability of large groups of personnel to more adequately complete the routine daily work volumes during periods of employee absences because of illnesses and vacations. Combining

general accounting activities also had an important advantage in that it resulted in good work load factors and reduction in peak loads. The use of larger groups of personnel to perform this work at central locations reduced the complexity of the work in that the job content was simplified. This allowed the use of employees at lower salary scales to perform the routine duties. Facilities to house these personnel were minimized because [1286] of the combination effort.

Q. Where were the general accounting activities conducted? A. Wachusett Gas and Central Massachusetts Gas activities were conducted jointly at Webster. Administrative control over this group, as well as Worcester County Electric, was provided by the Assistant Treasurer and his staff located at Worcester. General accounting activities for Northampton Electric and Northampton Gas were carried on jointly at Northampton. Administrative control over the activities at Northampton for these electric and gas affiliates was provided by the Assistant Treasurer and his staff located at Northampton, who reported to an Assistant Treasurer in Worcester. This administrative group also provided control functions for Northern Berkshire Electric and Southern Berkshire Power. Merrimack- Essex Electric, Lawrence Gas and North Shore Gas general accounting activities were done at Lawrence. Administrative control was furnished by the Assistant Treasurer and his staff who were located in Malden. This Assistant Treasurer and his staff provided the same services for Suburban Electric and Mystic Valley Gas. Mystic Valley Gas performed its general accounting activities on a joint basis with Suburban Electric Company at Malden. Norwood Gas general accounting activities were conducted jointly with Quincy [1287] Electric, Weymouth Light and Norwood at Quincy. Lynn Gas and Electric general accounting activities was done on a combination basis at Lynn. The

Treasurer of Lynn was responsible for all accounting activities.

Q. Were the stores accounting activities done on a joint basis? A. Yes, the stores accounting functions were performed jointly and in many locations the physical stores stock was maintained jointly or in jointly occupied quarters. Again, the nature of the work demanded segregation of stores accounting records but the advantages of joint administration, supervision and stores handling of stores accounting activities a month the electric and gas affiliates was fully utilized.

Q. Would you please discuss this in more detail? A. Certainly. A Stores Superintendent, located at Worcester, provided over-all supervision of stores activities for Worcester Electric, Central Massachusetts Gas and Wachusett Gas. Worcester Electric and Central Massachusetts Gas maintained joint storerooms at Webster and Southbridge. Personnel at these locations engaged in joint electric and gas stores work. Worcester Electric and Wachusett Gas handled stores work jointly at Leominster in a combination storeroom.

Northampton Electric and Northampton Gas also [1288] performed stores work jointly in a common storeroom building at Northampton. Stores accounting work was carried on jointly, utilizing punch card equipment at Malden, between Mystic Valley Gas and Suburban Electric. The storerooms were segregated.

Merrimack-Essex Electric and Lawrence Gas maintained a joint electric and gas storeroom with joint personnel maintaining the stores records at Lawrence. North Shore Gas storerooms were maintained separately from similar electric activities under the supervision of a Chief Accountant General, located at Lawrence. This employee also provided similar supervisory authority for Merrimack-Essex Electric and Lawrence Gas. Lynn stores functions were

fully integrated both as to accounting activities and physical stock handling.

Q. Mr. Johnson, were there any other joint activities conducted by members of District Treasury Organizations? A. Yes, there were several. Basically they included personnel engaged in insurance, medical and safety activities.

Q. Please tell us about them. A. Yes. Insurance, medical and safety services were provided to employees of affiliated electric and gas companies on a combination basis. Insurance services to employees included handling of group insurance and retirement records, informing employees of NEES System retirement [1289] benefits as well as federal social security benefits, the NEES System payroll sickness benefits, Blue Cross-Blue Shield medical and surgical services and assisting an employee's immediate family at time of his death.

Generally in periods of stress the insurance and medical personnel were available to assist employees. The insurance group also handled property damage claims in the respective areas of the affiliated electric and gas companies, assisted in determining insurance values of company owned properties and other related activities.

Safety services consisted of extensive safety training programs, investigation of accidents, to determine cause and responsibility, observance of employees at work to insure safety rules were being followed and the maintenance of detailed safety records.

Q. Where were these activities conducted? A. A group of insurance and medical employees were located at Worcester and provided services to employees of Worcester Electric, Central Massachusetts Gas and Wachusett Gas. Personnel of the general and administrative group of the Central District Treasury Organization located at Northampton provided services for Northampton Electric,

Northampton Gas, Northern Berkshire Electric and Southern Berkshire Power. Personnel located at Lawrence and Salem performed combination work for Merrimack-Essex Electric, [1290] Lawrence Gas and North Shore Gas. Personnel at Quincy performed this work for Quincy Electric, Weymouth Light and Power and Norwood Gas. At Lynn Gas and Electric members of the Personnel Department performed these services.

Q. Were there any other functions that involved combination activities that you observed? A. Yes, there were. In many locations electric and gas meter records were maintained by either an electric or gas affiliated company. Receipt and dispatch of customer telephone calls for establishing or discontinuing electric and gas service and the receiving and dispatching of customer service and trouble calls were handled from one location for both the electric and gas companies when both services were available in a common area. Customer orders, where meters already were installed, to establish or discontinue electric and gas service were executed by one individual.

Q. Could you please give us some examples? A. Certainly. Central Massachusetts and Worcester Electric maintained meter records jointly at Webster. Customer orders for read-in and read-out of electric meters and lock-in and lock-out of gas meters were executed on a combination basis by one serviceman making one field call. The receiving and dispatching of customer service electric [1291] and gas calls were handled on a combination basis at Webster during normal business hours. After hour electric and gas calls in this area were handled by substation operators of Worcester.

Lawrence Gas handled similar activities on a combination basis with Merrimack-Essex Electric. Customer service, maintenance of meter records, receiving and dispatching service calls and execution of customer orders were all

handled out of a combination service center at Methuen Street, Lawrence. Mystic Valley Gas performed this type of work in combination with Suburban Electric, North Shore Gas with Merrimack-Essex Electric, Northampton Electric with Northampton Gas and Wachusett Gas with Worcester.

There were minor differences in the way the functions were handled but they basically were fully integrated. Norwood Gas handled these functions on a single service basis. Lynn Gas and Electric handled them completely on a combination basis.

Q. Now then, Mr. Johnson, would you please tell us about the allocation of charges to the affiliated electric and gas companies for the payroll of employees engaged in combination electric and gas treasury and accounting activities? A. Yes, personnel were carried on electric and gas company payrolls as either full time or part time employees. In general, work load was the basis used to determine the payroll assignment. Occasionally electric and gas companies [1292] billed each other to compensate for differences. Various methods were applied to measure these work loads which determined the allocation of the payroll charges.

Q. Would you please discuss these methods? A. Yes. In determining work load, the various methods of allocation used by the operating companies gave consideration to meters in service, gross revenues, number of employees or number of customers served, as appropriate in the particular case. These were the bases used to allocate personnel, engaged in combination electric and gas work, to the payrolls of the respective affiliated electric or gas company.

Q. Who determined the method of allocation that was applied? A. This was the responsibility of the Local Managers and the Assistant Treasurers of the district treasury organizations in the field. The President and Treasurer of Lynn were responsible in their area.

Q. Were there any advantages in having the allocations determined in the field? A. Yes, there were important advantages. The field personnel were very close to the daily work and had a good knowledge of the work loads. In this position they were able to more accurately determine the allocations than would other system personnel not so close to the [1293] actual operation. Also, the field personnel were not restricted by rigid directives which could possibly result in improper allocations because of lack of familiarity with particular situations.

Q. Were these allocations reviewed at any time? A. Yes, I discussed the matter of review with responsible field administrative personnel and found that the allocations were reviewed periodically, usually annually. In addition, if a major change occurred which indicated a reallocation, a review was made at that time.

Q. You mentioned the companies billed each other. Would you please explain the nature of this billing? A. Yes, there were several examples. North Shore Gas customer bills were prepared at the machine center at Malden. Mystic Valley billed North Shore for this service. Central Massachusetts Gas and Wachusett Gas performed general accounting activities jointly. Personnel engaged in this work were employees of Central Massachusetts. Central Massachusetts therefore billed Wachusett, based on an analysis of work load for this work. Employees of Quiney Electric performed the general accounting work for Norwood Gas and billed Norwood on a work load basis for the work performed.

Q. Mr. Johnson, what information did you obtain to conduct your study of the allocations? [1294] A. Since electric and gas activities were so fully integrated in the four treasury districts, I requested and received detailed and summary data, concerning payroll costs, job assignments, job duties, volume and frequency statistics and

other related data. This material was detailed by accounting functions and companies. Summaries were prepared on an area basis to conform to the jurisdictional areas of the four District Treasury Organizations. The summaries showed the allocation of charges by functions for the respective electric and gas companies.

Q. What did you do with this material? A. I studied the data and applied tests to determine the reasonableness of the allocations.

Q. Would you please describe these tests? A. Certainly. Let me give an example. The Northeastern District Treasury Organization included two geographical areas, Malden and Lawrence. Suburban Electric and Mystic Valley Gas were in the Malden area. Merrimack-Essex Electric, Lawrence Gas and North Shore Gas were in the Lawrence area. The administrative group for both areas was located at Malden. A payroll analysis of all treasury and accounting personnel serving Merrimack, Lawrence and North Shore, including the administrative group at Malden, showed that the total annual payroll costs for all full time and all part-time employees serving Merrimack-Essex Electric, Lawrence Gas and North Shore Gas were approximately [1295] \$1,565,000. These costs were based on salary levels as of January 1, 1959 and did not include payroll taxes or fringe benefits. Of this total payroll, \$1,189,000 was paid by Merrimack-Essex Electric, \$180,000 by Lawrence Gas and \$196,000 by North Shore Gas. On a percentage allocation, it represented 76% charged to Merrimack-Essex Electric, 12% to Lawrence Gas and 12% to North Shore Gas.

In order to determine if this was a reasonable allocation, I compared the percentage charges to number of meters in service and gross revenues of the respective companies. Of the total meters in service for the three companies, Merrimack-Essex Electric served 72%, Lawrence Gas 14%

and North Shore Gas 14%. Of the total dollar revenues, Merrimack-Essex Electric received 83%, Lawrence Gas 8% and North Shore Gas 9%.

Q. In your opinion, Mr. Johnson, on the basis of your analysis and the results of your tests, were the allocations reasonable? A. Yes, there were that. It is my opinion that they were fair, reasonable and showed good results.

Q. Mr. Johnson, did you base your opinion on the tests made in the Lawrence area only? A. No, I made similar tests in other treasury areas that would be affected by severance; for example; tests applied to the Malden area companies of Suburban Electric [1296] and Mystic Valley Gas showed the payroll costs allocated 47% to Suburban Electric and 53% to Mystic Valley Gas. Suburban served 45% of the total meters in service and Mystic 55%. On a revenue basis, Suburban received 55% and Mystic 45%. Tests made in other District Treasury areas showed similar results.

Q. Mr. Johnson, so far you have discussed allocations of overall treasury and accounting costs to the electric and gas companies within District Treasury areas; now could you please tell us if you investigated the allocation of these charges on a functional basis. A. Yes, I tested the allocations of charges made to customer, general and stores accounting functions.

Q. Will you please tell us the results of this investigation? A. Certainly. The tests I made in the functional areas showed the allocations to be fair and reasonable. As an example of this, the Lawrence area as I have mentioned previously included Merrimack-Essex Electric, Lawrence Gas and North Shore Gas. General accounting payroll costs for these three companies were approximately \$297,000. On a percentage basis, 82% of this amount was allocated to Merrimack-Essex, 9% to Lawrence Gas and 9% to North Shore Gas. Comparing these percentage allocations to

the total gas and electric meters in service for the three companies. [1297] Merrimack-Essex served 72% of the total meters, Lawrence Gas 14% and North Shore Gas 14%. Comparison with total revenues for the three companies showed Merrimack-Essex received 83%, Lawrence Gas 8% and North Shore Gas 9%.

Q. Mr. Johnson, for the examples of your tests which you have given us, you used the number of meters in service and gross revenues to test the allocations. In your opinion, are these two measures a sound basis on which to evaluate the reasonableness of the allocations? A. Yes, in my opinion they are. There are several yardsticks that could be used to test the allocations of treasury and accounting costs. Gross revenues and meters in service are probably the most commonly used. The number of customers served is similar to meters in service. These measures may be applied to customer accounting costs with very satisfactory results. When applied to other accounting costs such as general and stores accounting, the results are generally good.

Always when applying these yardsticks, care must be taken to detect any unusual circumstances such as a great number of customers being served with two meters, a distortion in revenues, such as a large amount of revenue being received from a small number of industrial customers, or other unusual circumstances. My investigation did not disclose significant unusual circumstances.

[1298] Q. Did the methods used to allocate charges for treasury and accounting costs require considerable clerical effort? A. No, they did not. There was very little clerical effort involved. Once allocations were determined, it was a question of periodic review plus a review when circumstances changed. This was a relatively simple matter. Elaborate record-keeping and complex administrative procedures were not necessary.

Q. Mr. Johnson, will you give us your overall conclusions with respect to allocation methods in the NEES System?

A. Yes, we were thoroughly satisfied with the soundness of these methods and their results. In my opinion this is largely a result of fixing initial responsibility for allocations on officers who are most intimately and directly concerned and acquainted with the particular costs being allocated. On the basis of our study of these methods and their results, we concluded that each company in the system was paying its fair share and receiving fair return for what it paid.

Q. Mr. Johnson, were you responsible for determining the adequacy of the pro forma treasury and accounting personnel requirements shown in the Ebasco report? By the Ebasco report I am referring again to respondent's [1299] offered Exhibit 58. A. Yes, that was my responsibility.

Q. Will you please tell us how you went about this phase of your work? A. Certainly. Foremost I kept in mind that the working relationship with electric affiliated companies would no longer exist and that the gas companies would operate on an independent basis. With these thoughts in mind, I reviewed union agreements, job descriptions and salary grades to insure that the new organizations constructed were not in violation of union contracts. I analyzed statistics showing work volumes and reviewed my familiarity with the geographical areas served by the companies. I studied the work loads as they were performed in order to establish comparable work loads for employees in the new organization. I discussed personnel requirements for the independent gas companies with administrative and supervisory personnel in the field and obtained information concerning work details. I also reviewed the treasury and accounting services provided by NEPSCO to the operating companies and the extent of advisory services provided by NEES executives.

Consideration was given to those accounting services provided by affiliated companies for each other. [1300] Also I analyzed the personnel requirements with members of the Ebaseo organization to obtain their opinions as to the adequacy of the pro forma organizations.

Q. In developing these pro forma organizational structures for the independent gas comapnies, as shown in the Ebaseo report, did you follow the pattern of the organizations as you found them? A. No. We did not attempt to perpetuate the existing organizations.

Hearing Examiner Ewell: Were these last studies that you mentioned conducted on the basis of each gas company operated separately?

The Witness: Yes, sir.

Hearing Examiner Ewell: As an individually operating company?

The Witness: As an individually operating company.

If you will compare the treasury and accounting section of the pro forma organization chart for North Shore Gas, shown in the Ebaseo report on pages 520 with the Northeastern District Treasury Organization on pages seven and eight you will see that there they were organized in a completely different manner. Even if we had attempted to follow the pattern of the organization as of January 1, 1959, it would not have been possible because of the nature of the organization of the District Treasury Organizations and [1301] the services provided by NEPSCO.

Q. What do you mean by this? A. Under the District Treasury Organization accounting functions were frequently centralized for the companies at various locations throughout the system. Our objective was to provide accounting organizations for each gas company for operation on a completely independent basis. Administration and supervision, in the District Treasury Organizations, was common for a number of electric and gas companies. Upon

independent operation it was necessary that these functions be carried on within each independent gas company.

Q. How did you develop the pro-forma organizations shown in the Ebasco report? A. I first prepared the framework of the projected treasury organizations. I then requested administrative personnel in the District Treasury Organizations to furnish me with an estimate of the personnel changes consistent with this framework. Based on my past utility experience and knowledge of the work requirements I studied these personnel requirements to determine their adequacy.

Various factors that I considered were the number of meters to be read per man per manday, number of customers accounts handled by customer accounting clerical personnel, number of customer inquiries, customer orders processed, number of stores issues and receipts, frequency [1302] of employee pay days, number of labor distribution items, number of work orders issued and other related volume, frequency and scheduling data. Also of importance was the providing of adequate supervision under independent operation.

Q. Do you consider the treasury and accounting personnel requirements, as shown in the Ebasco report, for the respective companies, adequate for the independent gas companies in the event of severance? A. Yes, they are adequate but they are minimum organizations and would not produce the same quality and results that were attained under the NEES System. Although the increased general, customer and store's accounting personnel costs to the independent gas companies amounted to approximately \$531.700 annually, the organizations did not provide for all of the services of NEPSICO, and of significance was the absence of experienced administrative and supervisory personnel of the treasury districts.

Q. Would you please explain this a little further?

A. The independent gas companies would not have the treasury and accounting services of NEPSCO. In my opinion these services were very valuable. They included systems and methods work which provided for development and issuance of instructions for performing accounting procedures, internal audit activities, forms design and control work, depreciation study work, assistance and review of reports [1303] to regulatory bodies such as state commission reports, SEC reports, and other related items.

The independent gas company would, of course, avail itself of outside professional services for this work, when necessary, but these services would result in loss of economies because of increased costs. Also they are decided advantages to utilizing NEES System personnel in this work since they retain good working knowledge of the accounting policies, practices and procedures and require little orientation.

The loss of the administrative groups of the various treasury districts would be detrimental to the independent gas companies. The broad knowledge of utility accounting practices and procedures and the advantages gained from the experience with other operating affiliates which was enjoyed by these administrative groups would no longer be available. Only with large system operation can these benefits be realized.

Q. Mr. Johnson, did you consider as part of your study whether there were any ways in which the gas companies could obtain comparable benefits as those now received as part of NEES without incurring the substantial additional costs shown in the proforma organizations and other disadvantages of severance you have referred to?

A. Of course we did. That was one of the major purposes [1304] of our study—to ascertain the most economical

method of providing the services with a minimum impairment to the services themselves.

Q. Did you consider alternative methods by which these services could be obtained? A. Yes we did. The most economical would be to have the functions continue on a joint basis and to have NEPSCO continue to perform functions as in the past. However, it would be a completely unsound business practice for unaffiliated companies to perform treasury and accounting functions on a joint basis, as this would involve sharing with an unaffiliated company control and responsibility over money, records and information constituting the very heart of the company's business. I do not know of any comparable situation where it is done—and there are obvious reasons why this is so.

As far as the NEPSCO service in the Treasury and Accounting area are concerned, we have considered very carefully the possibility of these being purchased from outside firms. Without question the fees of outside firms would be substantially higher. We have assumed that after severance NEPSCO would not and could not perform services at cost. With respect to many of the present specified services now performed by NEPSCO in the Treasury and Accounting field, we have assumed that they would be assigned as part of the [1305] duties of personnel of the independent gas companies who would also be performing many other duties. Further, certain functions, because of cost considerations, would no longer be available to these companies. Beyond this, we have determined where outside professional services would be economical and where they would not. While we have assumed in our study that additional services would be performed by independent accountants, and have reflected this as an increased cost, we have not shown any dollar figures for other professional services in the Treasury and Accounting area which would undoubtedly be required, although only occasionally.

All this, of course, is quite aside from the very serious loss of efficiency and experience—which eventually would be felt both in dollars and in service—for which we could not make a dollar allowance in our study.

Q. Mr. Johnson, you told us that payroll for general, customer and store's personnel would result in an annual increase of \$531,700 to the eight gas companies in the event of severance. Would you please tell us the severance effect on treasury and accounting personnel of the electric companies in the NEES System? A. Yes. Payroll costs for personnel engaged in general, customer and store's activities for affiliated electric companies would increase approximately \$356,600 [1306] annually.

Q. What is the cause for such a major increase in these costs? A. Primarily the loss of economies of combination electric and gas treasury and accounting activities. As I previously mentioned, customer, general and stores accounting activities were performed on a joint or combination basis. Administration and general supervision was provided by the District Treasury Organizations on a joint basis using Common administrative, staff and supervisory personnel. The District Treasury Organizations provided a means of performing meter reading, customer service, accounts receivable, credit and collection, cashiering and other related customer accounting work on a joint basis for both electric and gas companies serving common areas. This was also the case for general and stores accounting activities. I have previously explained the problems involved in combined operation between non-affiliated companies.

Q. To give us a clear picture of the pro forma accounting organizations for the gas companies operating independently, would you please discuss the pro forma accounting organization as shown in the Ebasco report for North Shore Gas? A. If you will please look at the Pro Forma

Organization Chart of North Shore on page 520 of the report, I will discuss in detail the functions of the various groupings [1307] and relate them to the organization of 1958.

Under the pro forma organization, the Treasurer and Assistant Treasurer and Clerk would be responsible for financing activities, investor relations, federal, state and local tax matters, corporate records, insurance requirements, internal auditing, accounting systems and procedures work, regulatory and management reports, customer relations and in general, all accounting functions.

The Assistant Treasurer would be generally responsible for the supervision of general, stores and customer accounting activities. The duties assigned to the Treasury and Assistant Treasurer are similar to those formerly provided by the Treasurer, the Northeastern District Treasury Organization and NEPSCO. Also, the new organization would have to operate without the advice of NEES officials.

Q. Who were the administrative, general supervisory and staff personnel of the Northeastern District who would no longer be available to North Shore upon severance?
A. The Assistant Treasurer, an Executive Secretary and an Auditor. This group provided administrative control over treasury and accounting functions for Merrimack-Essex Electric, Suburban Electric, Lawrence Gas, Mystic Valley Gas, and North Shore. A Comptroller and staff of three persons, located in Lawrence, who provided general and supervisory functions for Merrimack-Essex, Lawrence Gas and [1308] North Shore, also would no longer be available to North Shore.

Q. How would the loss of services of these personnel affect North Shore if it were operated independently of the NEES System? A. For the most part, the Treasurer and Assistant Treasurer and Clerk would absorb these functions.

Q. Would you please continue with the general accounting work? A. Yes. In the Northeastern District Treasury Organization, there were six employees of North Shore who engaged full time in general accounting work. Six other employees performed general accounting work on a joint basis for Merrimack, Lawrence and North Shore. Four of these employees were on the payroll of Merrimack. One employee was on the payrolls of both Merrimack and North Shore and another was on the payrolls of both Merrimack and Lawrence.

Q. Mr. Johnson, to perform this work on an independent gas company basis, what would be the personnel requirements? A. Excluding the Treasurer and Assistant Treasurer and Clerk, nine full time employees would be required to do the general accounting work. They also would be required to provide management with statistical data and special studies as required. They would perform clerical insurance work as well.

[1309] Q. Do you think that this number of personnel would be adequate to accomplish the general accounting work? A. Yes, in my opinion it would be adequate but I do believe there would be times when peak loads would occur which would result in abnormal overtime. Also difficulty could be experienced during periods of employee absences because of illnesses and vacations. The pro forma payroll costs, shown in the Ebasco report, do not reflect these overtime costs.

Q. If you felt that the organization was adequate, why should these overtime situations occur? A. The personnel requirements were minimum. Under the Northeastern District Treasury Organization, larger groups of experienced personnel gave greater flexibility and were available to handle situations such as I described.

Q. Would there by any effect on personnel requirements on general accounting work for Merrimack-Essex Electric

Company? A. Yes, the personnel requirements for general accounting work for Merrimack-Essex would be reduced by one employee, an Accounting Assistant. This employee was one of the six employees I mentioned that performed work for Merrimack, Lawrence and North Shore. Merrimack would also absorb the payroll costs of the one general accounting employee who was on Merrimack and Lawrence payrolls and [1310] the other employee who was on Merrimack and North Shore payrolls.

Q. Would Merrimack-Essex suffer any other loss of economy in the treasury and accounting area because of severance? A. Yes, it would. Payroll costs of the Assistant Treasurer, Secretary and Auditor, who provided administrative control over the 5 electric and gas affiliates in the Northeastern District Treasury Organization, would be, [1311] reallocated to the electric companies in the event of severance of the three gas companies. The payroll costs of personnel engaged in miscellaneous treasury and accounting functions, for affiliated companies in the area, also would be absorbed by the remaining electric affiliated companies.

Q. What were the functions of this group engaged in what you call miscellaneous work? A. They provided personnel, insurance and safety services to North Shore and other affiliated companies. Two employees of the group provided supervisory and specialized accounting services.

Q. Who would absorb the duties of this group of personnel for the independent gas company? A. The nine employees of the pro forma general accounting section under the general supervision of the Treasurer and Assistant Treasurer and Clerk.

Q. Mr. Johnson, you mentioned that the remaining electric affiliates would absorb the reallocation of payroll costs of the Assistant Treasurer and his staff and of the miscellaneous group; could you please tell us how you came to

that conclusion? A. Yes. The Assistant Treasurer and his staff provided the administrative control function over all treasury and accounting work for the five electric and gas companies of the Northeastern District Treasury Organization. The Safety Supervisor provided joint services for Merrimack-Essex [1312] and North Shore. The Comptroller and his staff, Personnel Director, and the insurance group provided services for Merrimack-Essex, Lawrence Gas and North Shore. All of the services by these personnel were of an essential nature.

The size of the electric affiliates Merrimack-Essex and Suburban would alone necessitate the employment of these services. Merrimack-Essex served 165,200 customers and Suburban 80,300. The three gas companies enjoyed the services of these groups because they were members of the NEES System and because of the nature of the District Treasury Organization. In the event of severance, the gas companies could not afford to replace these services in their entirety. Because of the nature of this work and the caliber of personnel required for it, personnel in these groups could not be replaced by the remaining electric companies at lower salary rates.

Q. If the gas companies are severed, won't the work loads of these groups be reduced? A. Yes, to some extent they will, but for the most part the nature of their work did not involve routine volume clerical work. They were specialists and their work was applicable to all companies. Their work loads did not increase to any significant extent simply because the results of their work was applicable to a number of companies.

Q. What is the severance effect on North Shores stores [313] accounting activities? A. Payroll costs, to conduct stores activities on an independent basis, would increase \$4,800 annually. This amount is based on 1958 payroll levels and includes payroll taxes and fringe benefits.

Q. Will you please explain further this relatively small increase? A. Yes. For the most part North Shore operated its stores activity independent from similar electric activities. The general responsibility for North Shore stores activities was under the Chief Accountant-General who was an employee of Merrimack-Essex and located at Lawrence. The primary reason for increased costs in this instance was the loss of NEPSCO purchasing services. Under the pro forma organization, the purchasing function was assigned to the Stores Section. The size of North Shore did not seem to warrant a full time Purchasing Agent.

Q. What is the effect of severance of North Shore on customer accounting activities? A. There would be a serious loss of economy in this area.

Q. What is the extent of the loss? A. Severance would result in an increase in payroll costs for customer accounting activities of \$46,600 annually. This amount was based on 1958 wage levels and included payroll [1314] taxes and fringe benefits.

Q. What are the causes for this substantial increase? A. North Shore Gas operated jointly with Merrimack-Essex Electric in practically all areas of customer accounting including meter reading, cashiering, handling customer accounts receivable records, merchandise and jobbing billing and accounting, credit and collections, customer service, customer relations and other related activities. Customer bills for both companies were prepared at the Machine Center in Malden.

Combination customer accounting activities were carried on at Salem, Gloucester and Beverly. Branch stores were located at Danvers and Peabody, which were devoted exclusively to gas operations, displayed and sold appliances and provided customer convenience in bill payment and customer service activities. The extent of joint work in customer accounting activities was deep.

Hearing Examiner Ewell: We will recess at this point and reconvene at 2:00 p.m. this afternoon.

(Whereupon, the hearing recessed at 12:42 p.m. to reconvene at 2:00 p.m.)

[1315]

AFTERNOON SESSION

2:00 p.m.

Hearing Examiner Ewell: Let us resume, gentlemen.

Whereupon,

THOMAS J. JOHNSON, JR.

the witness on the stand at the time of recess, having been previously sworn, was examined and testified further as follows:

Mr. Vorenberg: I wonder, your Honor, if I could ask the reporter to read back the last question?

Hearing Examiner Ewell: Yes.

The Reporter: I do not have the last question with me. The notes of the morning session are in the office being transcribed.

Mr. Vorenberg: May I read the last question and answer from my notes in order to have the continuity?

Hearing Examiner Ewell: Yes.

(The notes were read off the record.)

Direct Examination (Resumed)

By Mr. Vorenberg:

Q. Mr. Johnson, would you please give us some examples of this depth? A. I previously mentioned combination meter reading in that it was a convenience to customers and also an efficient use of manpower since the Meter Recorder can easily read both the electric and gas meters once he has arrived at the customer's [1316] location. A single meter reading sheet was used to record both the electric and gas meter reading and to record the customer information. A

customer order to establish or discontinue the use of electric and gas service, after execution, was entered on a single meter reading sheet. The combination electric and gas meter reading sheet provided for single entry of customer information which was applicable to both services. One addressing media was used in customer bill preparation. Credit and collection telephone and field effort resulted in the collection of delinquent accounts for both electric and gas with only one call. Completion of customer order forms were greatly facilitated since they provided for both gas and electric work. Customer billing inquiries were completed by one employee with a single customer contact. All of this dual activity, and there are several others, resulted in a minimum of clerical effort and considerably reduced field work.

In addition to increased clerical and field work required under independent gas operation, supervisory functions must be provided for. Another significant factor that would result in increased personnel requirements was the loss of the Machine Center at Malden. Customer bills were prepared at this center. Upon severance, North Shore Gas would prepare its own customer bills, rate, revenue analysis and other statistical data. The increased payroll costs of \$46,600 [1317] provided for the customer bill preparation.

Q. What is the number of increased customer accounting personnel required upon severance? A. Eleven employees would be required by North Shore Gas and thirteen additional employees by Merrimack-Essex. The increased payroll cost, including payroll taxes and fringe benefits to Merrimack would be approximately \$69,700 annually. This increased payroll cost also provided for performing customer accounting activities for merely done in combination with Lawrence Gas Company.

Q. Would the customer accounting pro forma organization be adequate in the event of severance? A. Yes, it would be adequate to perform the work and render good service to customers.

Q. Mr. Johnson, is there anything else you would like to say about treasury and accounting activities? A. Yes, I would like to state again that in my opinion the NEES System provided good service to customers at low unit costs per customer. During 1958 the average gas commercial cost per customer for the 8 Massachusetts gas companies of NEES was approximately \$4.69. Twelve non-affiliated Massachusetts gas companies showed costs of \$6.37 per customer during the same period.

The pro forma costs of the gas companies under independent operation would approximate this latter figure. [1318] This is still a low unit cost both nationally and in the New England area, but it should be borne in mind that many elements of this cost in the pro forma organization reflect the continuation of methods of efficient operation and planning of treasury and accounting functions as established by NEES during the past years. The loss of the guidance and specialized advice of the NEES System will certainly in time result in significant losses of economy, although these are not reflected in the figures shown in our report.

Q. What is the aggregate increase in dollar costs as shown by your study in the treasury and accounting fields? A. For both electric and gas companies, the total annual payroll costs, for general, customer and stores accounting functions alone as shown by our study would increase \$888,300 annually upon severance. Of this amount the independent gas companies would be burdened with \$531,700 and the remaining electric affiliates \$356,600.

Q. Are there other severance costs that are not reflected in the Ebasco report? A. Yes, very definitely and although they are nonrecurring and no consideration of the dollar

amount involved was included in the Ebasco report they are of major importance.

Q. What are these non-recurring items? A. With straight electric and straight gas meter reading, meter reading books must be rerouted so that each [1319] meter reading book will represent a fair day of work. New addressograph plates or punched cards must be prepared for addressing customer bills. Gas and electricity meter records service location and customer credit listing files must be separated and new records prepared.

A vast quantity of equipment such as addressing equipment, mailing machines, customer service and customer history files, safes, check signing machines, multilith reproducing machines, payroll machines, customer billing machines, cashier counters, mail opening machines, filing cabinets and a host of other related office equipment. Severance of the gas companies will definitely cause a considerable amount of additional effort and expense in numerous areas.

Q. Do you have any thought as to the amount of this nonrecurring expense affecting the treasury and accounting department? A. I would estimate a minimum expense of 200,000 to 250,000 dollars, not including capital costs. This would provide for preparation of separate electric and gas meter reading sheets, rerouting of meter reading books so that they would represent a fair day of work, preparation of separate gas and electric service location and customer history records and other related customer accounting basic records.

Q. Mr. Johnson, would you give us your general conclusions concerning severance of the gas companies from the NEES System? [1320] A. As I have told you, there are significant economies from the joint performance of electric and gas treasury and accounting functions. As they were organized, they were carried on with what I regard as a

high degree of efficiency and absence of unnecessary expense.

To break up the very heart of this by separating the gas companies would make no sense at all from an operational point of view which would add materially to cost and would impair service to customers and reduce the depth and flexibility of both the electric and gas operations.

Mr. Vorenberg: Mr. Hearing Examiner, I have no further questions of Mr. Johnson at this time.

Hearing Examiner Ewell: Mr. Nowlin, do you have any questions?

Mr. Nowlin: Yes, I have a few I would like to ask Mr. Johnson.

Cross Examination

By Mr. Nowlin:

XQ. Mr. Johnson, I notice in the course of your testimony you referred to 12 nonaffiliated gas companies in Massachusetts. A. That is right, sir.

XQ. Could you identify those companies for the record? A. I would have to get a list from my paper, sir. I don't have it up here with me.

[1321] XQ. Could you supply it this afternoon? A. Yes, sir.

Mr. Nowlin: I would like to have those read into the record, Mr. Examiner, if it would not be too much trouble.

Mr. Vorenberg: May Mr. Johnson be excused for the purpose of obtaining this information?

Hearing Examiner Ewell: Yes, sure.

The Witness: All right.

It is the Berkshire Gas Company, Boston Gas, Brockton-Taunton Gas, Buzzards Bay Gas, Cambridge Gas, Fall River Gas, Fitchburg Gas Department. That is one of the combinations I mentioned. Haverhill Gas, Lowell Gas, New

Bedford Gas, and that is a combination company, Springfield Gas and Worcester Gas.

By Mr. Nowlin:

XQ. Do you know whether or not you have any municipally-owned gas companies in Massachusetts? A. I have no knowledge of any municipally-owned gas systems.

XQ. In making your comparison with these 12 non-affiliated companies, what was the basis of your comparison? A. I took the expenses as were reported on the DPU reports and divided by the total number of customers, the commercial expenses.

[1322] XQ. What is the DPU? A. The Department of Public Utilities of the Commonwealth of Massachusetts.

XQ. Was that based on the customers at the end of the year or an average of customers? A. That was based upon customers as of December 31, 1958.

XQ. Did you have available to you in connection with those comparisons balance sheets or income statements of these non-affiliated companies? A. No, I took this off the expense figures. I did not look at that. I was not interested in the balance sheet. I was looking at expense items.

XQ. Did you make any comparison of rates charged by the non-affiliated companies as compared with those of the NEES system? A. I did not, sir.

XQ. Was your study that you made a comparison of these companies? Was that reduced to a statistical form?

Mr. Vorenberg: Maybe the witness understood the question but I am afraid I don't.

The Witness: I don't understand.

Mr. Nowlin: Strike that question. I will rephrase it.

By Mr. Nowlin:

XQ. In making your comparisons of the 12 non-affiliated [1323] companies with those of the NEES system, did you reduce those comparisons to writing or in report form?

A. I just took that on an analysis. There is nothing in writing.

XQ. You have no written analytical comparison? A. I have this right here, yes, sir, which is an analysis.

XQ. Do you have a copy of that that would be available for the record?

Mr. Vorenberg: Mr. Nowlin, I have not even seen what he is talking from, but it sounds to me as though that is one of his working papers.

Mr. Nowlin: I asked if he had a copy that would be available in the record.

Mr. Vorenberg: I am sure we can make it available to you and for the record a summary of whatever information you want from the DPU reports. Without having seen it myself, I am reluctant to suggest that one of Mr. Johnson's worksheets be put in the record.

Hearing Examiner Ewell: If it is not too voluminous, could not counsel take a look at it now?

Mr. Nowlin: Mr. Examiner, we may want to make some studies of these comparative figures ourselves. We do not have the information available. If he had a copy available for the record we could put it in the record now.

Mr. Vorenberg: These are all matters of public record. [1324] We are talking about things that are on file with the Department of Public Utilities. We will certainly undertake to make available to Mr. Nowlin and to put in the record whatever materials of that sort he wants.

I think it would be more orderly if we had an opportunity to see exactly what this piece of paper is and be sure that is the one that expresses it in the most useful way. We will certainly give you what you want on that.

Mr. Nowlin: The thought occurred to me there is no way of us checking Mr. Johnson's conclusions that he drew from these comparisons without knowing what he worked from.

Mr. Vorenberg: Do you want to take a moment while we look at this sheet?

Hearing Examiner Ewell: Yes. That is what I was going to suggest. That is what I did suggest.

We will take a short recess while you do that.

(Short recess.)

Hearing Examiner Ewell: Have you reached any kind of an understanding on this material?

Mr. Vorenberg: Mr. Hearing Examiner,—

Hearing Examiner Ewell: Yes.

Mr. Vorenberg: —we have this working paper which is the basis of Mr. Johnson's testimony, but we would like, since it is a working paper, to offer it tomorrow after we have had a chance to make copies of it in sufficient quantity. [1325] If there is no objection to that—you do not object to that—we will give them to you as soon as they are ready.

These are all matters of public record. We are delighted to make them available but would like to do it in an orderly way.

Mr. Nowlin: It seems to me the most orderly way is when the witness is up here testifying and reaching a conclusion from the statistical information to put the statistical information in at that time. If you do not have it available, I suggest we reserve an exhibit number and supply it any time you want to.

Mr. Vorenberg: That is perfectly all right.

Hearing Examiner Ewell: Did you want to ask him questions at this time, Mr. Nowlin, if you had it in your possession?

Mr. Nowlin: No, sir. I did not have a chance to study it yet. It is information that he has had available as a basis for his conclusions. If it has information on that which I know from my associates that they will want to study—

Hearing Examiner Ewell: Then you are going to substitute a photostatic copy, is that right?

Mr. Vorenberg: That is right.

We will make it available.

And do you want to reserve a Commission Exhibit [1326] number, whatever the next number is in this proceeding for that?

Hearing Examiner Ewell: Do you want it as a Commission Exhibit or your own exhibit?

Mr. Vorenberg: It is one of our witness' working papers, your Honor. It is not an exhibit which we are offering.

Hearing Examiner Ewell: I see.

Mr. Vorenberg: But we are perfectly willing to have it go in. As I understand it, it will be Commission Exhibit No. 3.

Mr. Nowlin: I do not know why you are reluctant to offer it.

Mr. Vorenberg: We are not the least bit reluctant.

Mr. Nowlin: I do not know why I should offer it. It is supporting your witness' testimony. If you are not willing to, I will.

Mr. Vorenberg: It is not a question of being unwilling. It is not one of our exhibits.

Mr. Nowlin: They are producing a witness here testifying and reaching conclusions on statistical information, and we are asking to put the statistical information in the record.

Hearing Examiner Ewell: It is supporting material. I do not see why it could not come in as your exhibit unless you find something about it that you do not want to be bound by.

[1327] Mr. Vorenberg: I consider the request a little unusual and I have no objection whatsoever to having it be one of our exhibits. Reserve exhibit number 90.

Hearing Examiner Ewell: All right.

Mr. Vorenberg: Respondents' Exhibit No. 90.

Hearing Examiner Ewell: All right. It will come in, then, as Exhibit 90.

(Respondents' Exhibit No. 90 was RESERVED.)

By Mr. Nowlin:

XQ. Mr. Johnson, do you happen to know which one of those 12 non-affiliated companies purchases gas from Tennessee and which purchased from Algonquin. A. No, sir, I have no knowledge of that.

XQ. As I understand your testimony, you did not make an analysis or study at all of these eight subsidiaries of NEES, assuming they were under common control. A. Yes, I engaged in the study of the combined operation report which has not been submitted to you people as yet, sir. I am familiar with that, yes, in detail.

XQ. Your testimony this morning— A.—did not cover that in any manner at all.

XQ. I think in the course of listing your qualifications and background, you named some companies which you had done some work for but you did not identify those companies. A. I named the type of work that I did but I did not identify the companies.

[1328] XQ. Is there any objection? A. No, sir, I would be happy to.

XQ. I would appreciate it if you would identify those companies for the record. A. One was Duquesne Light Company, another Bridgeport Gas Company, another was Montana-Dakotas Utilities. Another was Central Hudson Electric and Gas up in New York. There are probably several others.

Mr. Nowlin: That is all I have for the present, Mr. Hearing Examiner.

Hearing Examiner Ewell: The witness is excused, as the others have been, subject to recall.

Mr. Vorenberg: Thank you, your Honor.

(Witness excused.)

Mr. Quarles: I have been informed fairly recently that the members of the Massachusetts Public Utilities, who have been here through the hearing up to this time, will find it necessary to leave this afternoon and so I would like to rearrange somewhat the order of my own presentation and after Mr. Quig has introduced the supplementary report and given a brief explanation of it, before completing his testimony to let him be excused so that the Chairman of the Department of Public Utilities can go on, if you have no objection to that.

Mr. Nowlin: I have no objection.

[1329] Mr. Quarles: Then I would like to recall Mr. Quig.

Whereupon,

ROBERT S. QUIG

was recalled as a witness and, having been previously duly sworn, was examined and testified further as follows:

Direct Examination

By Mr. Quarles:

Q. Mr. Quig, the Ebaseo report about which you have previously testified, offered as Respondent's Exhibit No. 58, sets forth the increase in operating expenses which would occur if the eight gas companies in the NEES system were to be separated and operated each independently. Was Ebaseo so asked to consider the possibility that the gas companies might be operated on a combined basis of some kind apart from the NEES system? A. Yes, we were.

Q. And have you considered this possibility? A. Yes, sir, we have.

Q. I show you a bound document entitled "Gas Severance Study—Supplemental Report—Combined Operation—Eight Gas Companies." Will you tell us what this is?

A. This is a report from Ebaseco summarizing the results of the study we made of the effect of operating the gas companies on a combined basis.

Q. Was this supplemental report also prepared under [1330] your supervision? A. Yes, it was.

Mr. Quarles: May I have this marked for identification as our Exhibit Number 91?

Hearing Examiner Ewell: Yes.

(Respondents' Exhibit No. 91 was marked for identification.)

Mr. Quarles: And perhaps it would be well to point out that we have been referring repeatedly to the Ebaseco report that was previously offered as the Ebaseco report.

It relates entirely to the basic information and to the possible operation of the individual gas companies separately.

We now are offering this additional Ebaseco report which we refer to as the supplemental report and obviously it relates to the possible operation of the eight gas companies as a single system or on a combined basis.

By Mr. Quarles:

Q. Now, Mr. Quig, what was the purpose of this supplemental study and report? A. Our original gas severance study was developed on the assumption that the eight gas companies would go out of the NEES system individually and be operated independently of one another. We were asked to work on this assumption originally because it is impossible to know just what the [1331] terms of any disposition of these companies by NEES would be. Therefore, we had no basis for assuming that they would be under common control.

The losses which the original gas severance study showed would result from a number of factors. Some are due to the elimination of common executive officers and the necessity of hiring separate executives for each company. Some

are due to the elimination of combined gas and electric operations in joint service areas. Some are due to the loss of NEPSICO's services to the gas companies and the necessity of securing those services in some other and more expensive manner. As we developed the original gas severance study and saw that there were these several sorts of losses involved, the NEES people and we agreed that it would be useful to ascertain which of the losses set forth in our original severance study were due to the separation of the gas business from the electric business and which would be due to separating the gas companies, one from another upon disposition; or to put it differently, to ascertain the extent to which lost economies shown in the Ebasco Report could be salvaged by combined operation of the gas companies. This Supplemental Report sets forth the results of that further study.

Q. Mr. Quig, will you tell us generally how this study was carried out and who participated in it? A. From Ebasco's side, it was essentially the same [1332] team of experts who participated in the basic Gas Severance Study. Much of the data and information which we needed was the same as that which we gathered and studied which I have described earlier. Therefore, this further study of operations on a combined basis was to a large extent a question of analyzing information which we already had, and then gathering such information as was necessary.

Q. In general, did the Ebasco and NEES people work together on this in the same manner as has been described with respect to the work on the basic Ebasco Study? A. Yes, a significant part of the job of preparing this further study was discussions and joint study with the NEES people to analyze the projections set forth in the supplemental report and to provide a firm basis for our own judgments.

Q. In general, Mr. Quig, did the Ebasco personnel give specialized study to the same areas as they had covered in their work on the basic report? A. Yes. As I have indicated just now, we operated very much in the same way, particular members of our team pursuing their study in greater depth in their particular areas of expertness and responsibility and then reviewing and analyzing all of the conclusions together as a team.

Q. Please examine briefly the method you used and the basic assumptions you made in connection with this supplemental study and report. [1333] A. We determined, first, that a central organization would be the most economic method of performing the more specialized executive, administrative and staff functions necessary for the combined operation of the eight companies.

One feature of the NEES system which made our job easier in this respect was the existence of the present Gas Division. This provided a very logical skeleton or pattern for us to follow in projecting the requirements for the Central Organization.

Second, we determined that the functions left to local operating and management personnel would be just about what they are now except for changes made necessary by the separation of local gas and electric operations.

Therefore, we patterned the local management and operating organizations after those presently in existence.

In the third place, we determined that local treasury and accounting functions would be handled by an organization which basically would follow the lines of the prior severance study. We made no assumption about the sort of corporate or other vehicle which would be employed to effect a combination of the eight gas companies, except that there would continue to be eight corporate entities at the operating level and that there would be 51 per cent common ownership of the stock of these companies. The

latter assumption is necessary if certain savings are to be effected in insurance costs.

[1334] The Supplemental Report sets forth no expense for the maintenance of a corporate or other vehicle for effecting combination, and, therefore, the recovery of economies lost in independent operation reflected by this Supplemental Report should be viewed as an outside figure which would be reduced by the amount of such cost.

Q. Why did you assume that a new central organization would be built around the present Gas Division? A. We used the present Gas Division as the nucleus of the pro forma central organization for obvious reasons. Since 1952 the Gas Division has been coordinating the management and operation of the eight gas companies. This organization has shown itself to be an efficient and effective organization for the performance of its functions, which need not be affected by a split between the gas and electric business.

Furthermore, the personnel of the Gas Division are well trained and skilled in the gas business and have intimate knowledge of these particular companies gained through years of experience.

Q. Who was responsible for developing that pro forma central organization for combined operation of the eight gas companies? A. Mr. James F. Simes, Gas Management Consultant, Ebaseco Services, although I and other members of the Ebaseco [1335] group participated in this study.

Q. This is a very significant item in this supplemental report, and I intend to call Mr. Simes to testify on the central organization and its effect on local executive, administrative, and operational personnel requirements.

I will, therefore, ask you to turn to the local accounting organizations.

What was the basis of the pro forma local accounting

organization for the combined organization? A. The requirements for the local accounting organizations under combined operation, of course, with minor exceptions were quite similar to what would be required for independent operations.

Q. Why was this? A. The pro forma accounting organization for independent operation reflected the breaking apart of the very many joint gas and electric functions such as meter reading, bookkeeping, collection, etcetera, which are the functions where substantial losses in economies were involved.

Q. The supplemental report shows a reduction of \$44,000 in the general accounting area upon combined operation. What is the cause of this reduction? A. Under combined operations the central organization would include a treasury staff that would specialize in insurance, tax, financial and other areas, and would prepare [1336] statistical data and special studies are required by management. The independent gas company pro forma organizations provided for the performance of similar work by the local general accounting groups.

Q. Why is there no change in customer accounting costs in the combined operation as compared to independent operation? A. The customer accounting requirements under combined operation follow very closely the pattern of the actual organization during the test year 1958 with the major exception that electric activities would no longer be performed in combination with gas activities.

Q. Why did you use the independent organization as shown in the Ebasco report as a point of reference? A. These organizations already reflected the elimination of combination electric and gas accounting activities, the loss of services of NEPSCO, the loss of advice from NEES management personnel and the severance of the District Treasury organizations. They were, in effect, self-con-

tained units. Using these independent pro forma organizations, it became a matter of considering functions that would be performed by the central organization that had been provided for in the independent pro formas.

With this in mind, the local manpower requirements were adjusted to reflect the functions that would be performed by the central organization.

[1337] In the general accounting area, the changes in the local groups reflect the results of centralizing certain specialized functions and some joint operations at field locations.

Q. What about stores accounting? A. The personnel requirements for stores activities under combined operations would be less than that required under independent operations. The principal reason for this is that the purchasing function would be performed by personnel of the central organization. Basically, this accounts for the reduction of \$31,500 in stores accounting costs under the combined operation.

Q. Mr. Quig, did you consider in connection with this study the possibility of centralizing treasury and accounting to a greater degree than you have projected in the Supplemental Report? A. Yes, we did, sir, and we concluded that in our judgment the organization in the form it has been presented in this Supplemental Report is a sound and reasonable one, and in general is the type of organization which we would recommend for combination of these companies at the outset. Of course, it is possible that in time further centralization might prove useful. However, based on our own experience, and on continuing study of this type of reorganization by the NEES system itself, it is by no means clear that economy [1338] lies in that direction. This would depend upon such factors as business growth, new developments in accounting mechanization and others. However, I can say that one of the

disadvantages of separation of gas from electric is that it might postpone the time when the size of the applicable business units would justify such movement in the direction of centralization.

Q. Mr. Quig, turning to the summary sheet at the back of the supplemental report, marked for identification as Exhibit 91, let us consider the major items of difference shown therein. What does the summary show? A. The first column sets forth a summation of the net effect upon income accounts before Federal income tax which would arise upon severance of each of the gas companies from the NEES system on an independent basis, and includes all adjustments to revenue and expense accounts as shown in the appropriate section of the gas severance study.

The second column shows the effect upon such income accounts of the projected changes required by the combined operation of these companies.

Q. Please explain why the executive, administrative and staff functions would be reduced by \$83,100. A. This saving is due to the common employment of executive, administrative and staff personnel for all eight companies. However, the \$83,100 does not tell the full story, [1339] since costs are included in this section for the combined central operation which are offset by other reductions in general accounting, stores and professional services. In other words, the new executive and administrative group not only costs less but also performs more functions than do the eight executive and administrative groups for independent operation.

For example, the new executive and administrative group contains a purchasing agent and staff and a general counsel to perform functions mostly left to stores accounting personnel and outside counsel under independent operation.

Q. Will you again explain how the cost of general accounting is reduced by \$44,000? A. As indicated above

the treasury staff of the central organization would assume certain duties which would have been performed by the general accounting groups of the eight independent companies. In addition, certain economies were obtained through joint functions in local offices.

Q. How is it possible for the eight gas companies on a combined basis to perform the stores function at an increase of only \$9500 when on an individual basis this would require \$41,000? A. Under combined operation the purchasing function would be performed by the central organization. Under independent operation purchasing would be included in the stores [1340] function. This change enables us to eliminate personnel assigned to stores accounting for purchasing functions under independent operation.

Q. In the matter of insurance, how is the saving achieved? A. This saving would be effected through placing coverages under one policy as opposed to eight separate policies. It should be emphasized, however, that this saving could only be obtained through 51 per cent common control by a single interest.

Q. Why is there a reduction in the increase in cost of professional services from \$79,800 for independent operation to only \$20,000 for combined operation? A. For legal services we estimated that the Central Organization would incur an annual cost of approximately \$10,000. This covers the cost of outside legal services which would be required over and above the services of the General Counsel. On the other hand, legal services as required by the local companies for independent operation would be reduced in the amount of \$64,000. Auditing expenses, we estimated would be reduced by \$5,800 for the whole system as compared with independent operation. As a result the net effect of combination is a reduction of \$59,800 in the

expenses of the eight gas companies and the Central Organization for outside professional services.

[1341] Q. Mr. Quig, in making this supplemental study, did you consider the extent to which services and functions now performed by the Service Company could be purchased from outside organizations instead of being performed by the Central Organization? A. Yes, we did. I have already described the process by which we determined in our study of the effects of severance on an independent company basis which services and functions could economically be performed by the companies themselves and which they would either have to obtain from outside or forego. We engaged in a comparable analysis with respect to the executive, administrative, and staff functions for the Central Organization.

Q. Why didn't you assume that the eight gas companies operating together on a combined basis would have a service company? A. The answer to that question depends on what you mean by a "service company". In one sense the central organization as projected in our supplemental study can be said to be a service company. We have not assumed a separate corporate organization for it but that is because we have made no assumptions as to particular corporate forms. The Central Organization does include personnel to perform many of those functions of NEPSCO which, in our judgment, it would be economical to have performed for the eight gas [1342] companies on a regular basis, although in many instances on a less specialized basis.

There are some functions which we have assumed would have to be acquired from outside organizations as needed.

Q. As a result of your independent investigation of the economies that might be achieved from the eight independent companies combining into an independent group, is it your opinion, and the conclusion of the Ebasco organization, that the supplemental report reflects all the savings

which might be achieved by a combination of the gas companies? A. It reflects more savings than could be achieved in actual practice. It must be remembered that the report does not take into account any corporate or financial costs of the corporate or other vehicle used to hold these companies together.

Q. Mr. Quig, the table which appears on page 40 of the supplemental report is set up on the basis of showing first the loss of economies resulting from gas severance on an independent company basis, then the losses resulting from severance on a combined basis, and then the difference. Why, in this table and in certain of the testimony which you have given concerning the supplemental report, is there reference to the Ebaseo study on an independent company basis rather than comparing all the way through the combined basis with the situation as at January 1, 1959? [1343]

A. If the only purpose of the entire study were to show the effects of severance on a combined basis, the table on page 40 might have been set up on a simple before and after basis. However, for the reasons which have been indicated we were instructed to explore the effects of severance both on an individual company basis and on a combined basis. Since an analysis of the loss of economies on a combined basis requires much of the ground work which is set forth in the study on an independent company basis, it seemed to us to make more sense to follow the independent company basis through to its conclusion and then look at the combined basis.

Q. Would the results of your study of the effect of severance on a combined basis have been any different if you had gone directly from the present situation to severance on a combined basis without your intermediate analysis of the independent company basis? A. No, it would not. The very heart of our study of the combined basis was a determination of which functions these companies

could pool and which functions would still have to be done on an individual basis. This determination was absolutely independent from any of the conclusions which we had reached in our study on the independent company basis. We looked at each function which had to be performed for or by these companies and decided in each case which method would be the most economical, and the soundest from an administrative and [1344] operational point of view.

An examination of the supplemental report will show this.

In the executive and administrative area, for example, we determined that there could usefully be a central organization and proceeded to set up what seemed to us to be the soundest organization. On the other hand, in the customer accounting area where our detailed analysis of the best way of performing this function convinced us that it would not be efficient to perform on a joint basis we naturally enough made use of the basic work that we had done in connection with the independent company study.

Q. To summarize then, Mr. Quig, if I understand what you are saying, you used the independent company study as source material where the work you had done was applicable, but that your results as shown in the supplemental report were no different than they would have been had you started from scratch and gone directly to an analysis of the effects of severance on a combined basis. A. That is exactly correct, sir.

Q. Now, Mr. Quig, earlier in your testimony on the supplemental report you stated that one of the assumptions on which you proceeded in making this supplemental study was that the eight gas companies would continue as separate corporate entities. Would it make a material difference in [1345] the extent to which economies would be lost by severance if the combinations went to the extent

of putting the companies into a single corporate unit?

A. No. The difference would not be material. The only difference that would amount to anything would come in the general accounting area where it would not be necessary to maintain eight separate sets of books.

Related to this would be the saving from having only one corporate entity required to file reports with regulatory agencies as well as reports to management, stockholders, and the like.

As I have indicated, even these savings are not material.

Furthermore, in my opinion, an assumption that these companies could or should be put together is somewhat unrealistic. Putting these companies into a single unit would require approval of the Massachusetts regulatory authorities and this Commission.

Furthermore, it would entail major financing problems. Advantageous terms of existing indentures would be lost, and, in general, to the extent that economies could be realized from wiping out these corporate lines, the same economies—in fact, even more so—would be achieved by doing the same thing to these companies today within the NEES system, once other obstacles to this had been removed.

[1346] Mr. Quarles: Mr. Examiner, at this point I would offer the supplemental report on gas severance as Respondents' Exhibit 91, but in view of the fact that ruling on the original report has been reserved, I would certainly not press for determination on this at the moment. I am glad to have the ruling reserved.

Hearing Examiner Ewell: I assume, Mr. Nowlin would want an opportunity to examine it before any ruling is made.

Mr. Nowlin: Yes, your Honor.

Hearing Examiner Ewell: And it will therefore be

marked for identification at this time and the ruling on its reception reserved.

Mr. Quarles: Yes, sir.

I think this is a good point for a break, and with your permission, sir, I would ask to have Mr. Quig excused.

Mr. Nowlin: I would like to ask him two or three questions.

Mr. Quarles: Certainly.

Cross Examination

By Mr. Nowlin:

XQ. Mr. Quig, why did you in your assumption on the combined companies assume a 51 per cent stock ownership rather than 100 per cent? A. That was the point which we knew was the minimum [1347] point that, from an insurance point of view savings could be obtained.

XQ. It would make a material difference in the tax consideration involved, would it not, where they could file a consolidated tax return? A. We only concerned ourselves with the operating expense aspects of this.

XQ. In making your computations of the combined companies did you make any comparison with other nonaffiliated companies operating in Massachusetts, that is, with respect to the personnel required? A. The eight combined?

XQ. Yes, sir. A. We had available to us the various reports made to the Department of Public Utilities by the various Massachusetts gas companies.

XQ. In setting up your pro forma chart appearing on page 4 of your supplemental report, did you make any comparison of the executives appearing on this chart with those actually employed by nonaffiliated companies in Massachusetts? A. Only in a general way. We felt, from our own point of view, Ebasco's point of view, that every organization needs a head and also somebody behind him,

an executive vice president, and then fanned out pretty much the way you see it there; various other companies, most gas companies I know of, [1348] generally follow this type of set-up more or less.

XQ. You made no comparison, though, with other Massachusetts companies to determine whether or not these officials were in line with what was actually employed by other gas companies? A. I would say that they were generally, yes.

Mr. Quarles: Pardon me.

But, as Mr. Quig testified, this was an area that was primarily developed by Mr. Simes, who will come on for testimony later and be able to give more detailed information.

Mr. Nowlin: I beg your pardon, Mr. Quarles. It was too much for me to assimilate here, sitting and listening.

Mr. Quarles: We have no objection to your questioning Mr. Quig on it, but note that Mr. Simes is to be a source of more detailed information.

By Mr. Nowlin:

XQ. Looking at the results appearing on page 40 of your supplemental report, do you know whether there would be any substantial difference in the estimates appearing on this page as compared with the actual cost of running the gas companies at the present time or during the past year? A. Well, these are costs over NEES system costs for the year 1958.

XQ. What I am trying to get at is: If you were to total up the same items for the operations of the eight companies [1349] for the year, say, 1959, would the total amount be less or greater than that reflected on your estimate on page 40? A. Going back to my original point in both cases here, the comparison, both of these comparisons, eight companies independent, eight companies combined, indicate an increase in one case of \$1,495,000 and in the second case

\$1,165,000 over what the cos^s under present NEES system operation.

XQ. I beg your pardon. I think you stated from the operation's viewpoint, it would not make much difference whether these companies were merged into one company or consolidated or what-have-y^d. A. That is correct.

XQ. Than if they were combined. Is that correct? A. Yes. We carried through and assumed the main corporate entities.

XQ. Do you know whether not these individual companies, or the eight gas companies, rather, financed part of their requirements through issuance of debt securities themselves? A. Presently, they do, yes.

XQ. Were you asked to make any estimate of the cost on raising capital on the consolidated company basis as compared with the cost of raising capital on an eight-company combined basis? A. No, sir, we were not. [1350] Mr. Nowlin: I think that is all I have at the present time, Mr. Quig.

Pardon me. Just a minute.

By Mr. Nowlin:

XQ. Mr. Quig, directing your attention to NEES Exhibit No. 59, Adjustments to Statements of Income of Eight Massachusetts Gas Companies owned by NEES Caused by Severance of Gas Business— you have available a comparable compilation assuming the combined companies?

A. No, sir, I do not.

Mr. Nowlin: Mr. Examiner, I am going to request that the company prepare a statement showing the effect of the combined eight companies, that is reflected on this Exhibit No. 59 with respect to the eight independent companies.

Hearing Examiner Ewell: the Respondent agreeable to preparing such an exhibit

Mr. Quarles: I would think that we would get along a little better if these requests for things that they wish us to prepare and put into the record as our exhibits were discussed with us. It is certainly our intent to make available figures that are available to us and to assist them in the matter of preparing exhibits, but I, frankly, am not enough of an accountant and do not know enough about the financial aspects of it to answer these requests without checking with [1351-52] our accounting people just what can be done. And I would expect that that is something that we can do. But I would like an opportunity to check in each of these cases on matters of requests for additional exhibits.

Hearing Examiner Ewell: You could advise counsel later in the day or in the morning, could you not?

Mr. Quarles: Oh, yes, certainly, sir. At any time if they wish additional material, if we know what it is, we will be glad to do our best to cooperate with them.

Hearing Examiner Ewell: You do not want to reserve an exhibit number for it now, do you?

Mr. Nowlin: No, sir. I was just making this what I thought an assistance to counsel for the company. We could hold all of these until we get through and analyzing, comparing all of these statements, and ask for them.

Mr. Quarles: Ask for them as you go along as you wish.

I am glad to be apprised as long as I am not obliged to give you an answer when it involves something that I do not know the answer.

Hearing Examiner Ewell: It may not loom so large, too, if it is done as we go along rather than to have them requested all at one time.

By Mr. Nowlin:

XQ. Mr. Quig, I think in the course of your previous [1353] testimony, you indicated that you had made a study

of other companies in the area on reaching some of your conclusions.

Were those the same twelve nonaffiliated companies that your associate identified here earlier today? A. Yes, we used those.

XQ. You don't know whether that was all of them or not that you used? A. I would say generally those were the ones that we considered as the major companies in Massachusetts.

XQ. Do you happen to have a copy of the companies that you were referring to there in your previous testimony and could that be made available for the record? A. I would refer to the same companies that Mr. Johnson referred to.

Mr. Nowlin: That is all I have at the present time.

Hearing Examiner Ewell: I wonder if counsel for the Massachusetts Public Utilities Commission would have any questions of this witness?

Mr. Murray: No, we do not, your Honor.

Hearing Examiner Ewell: Do you have any comment? I understood you are leaving this afternoon.

Do you have any comment to make before you leave?

Mr. Murray: The Chairman of the Commission is here to testify, and I think he will have an opportunity to answer that question himself.

[1354] Mr. Nowlin: Would you wait just one minute?

Mr. Quarles: Could Mr. Quig be excused?

Hearing Examiner Ewell: Yes.

(Witness excused.)

Whereupon,

FRANCIS X. LANG

was called as a witness for the Massachusetts Department of Public Utilities and, after being first duly sworn, was examined and testified as follows:

Hearing Examiner Ewell: Give your name to the reporter.

The Witness: My name is Francis X. Lang.

Direct Examination

By Mr. Murray:

Q. Will you please state your name, address, and occupation. A. My name is Francis X. Lang. I live in Wellesley, Massachusetts, and I am a member of the Bar of Massachusetts and Chairman of the Massachusetts Department of Public Utilities.

Q. When did the Massachusetts Department of Public Utilities become aware of this proceeding? A. In August 1957 the Department was served with a copy of the Securities and Exchange Commission's notice instituting this proceeding against New England Electric System and its subsidiaries.

[1355] Q. Would you give briefly the reasons for your appearance here at this time? A. The Massachusetts Department of Public Utilities is, of course, vitally interested in the affairs of the Massachusetts subsidiaries of the NEES system, whether they be in the electric business or in the gas business.

We have conferred with NEES system officials from time to time with respect to the issues raised in the proceeding and have considered the matter in executive sessions. We were particularly concerned with the adverse effect which the severance of the gas properties from the NEES system would have and, accordingly, our written notice of appearance was filed with this Commission shortly before the convening of the hearings with respect to the issue of the retainability of the gas properties as a part of the NEES system.

Q. Please tell the Hearing Officer whether you are appearing as an individual or as an authorized representative

of the Department. A. I am here on behalf of the Department. I was authorized to appear before this Commission and to give the Department's views and Mr. Murray, who is one of our Commissioners and an attorney, was authorized to be the counsel for the Department in this proceeding.

Q. What is the Department's position in this proceeding? A. As stated in our notice of appearance it is the [1356] position of the Department that the economies of joint operation of gas and electric properties by the NEES system are substantial, that a separation of such joint operation would be adverse to the interests of the residents of Massachusetts and may necessitate increased gas rates as a result of the apparent substantial additional expense flowing from the separation of such joint operation and that, under the provisions of Section 11 (b)(1) of the Public Utility Holding Company Act, specifically clauses (A), (B), and (C) thereof, the gas utility companies of the NEES system may be retained under common control with the system's integrated electric utility system.

Q. Mr. Lang, will you briefly describe the nature and scope of the Department's regulation of the gas and electric business in Massachusetts? A. Broadly speaking, under the Massachusetts statutes the Department is charged with the general supervision of gas companies, electric companies and combination gas and electric companies—with few exceptions, most of the things I will say apply to all three types of companies—and is directed to make investigations to assure that they are conducted in a manner consistent with the public safety and convenience. More specifically, the Department has and exercises regulatory powers with respect to rates, service standards and extensions, accounts, depreciation, records and reports, and financial [1357] and corporate matters including security issues, mergers and sales of property. The Department has power under the statutes to adopt rules and regulations

to implement its regulatory control in many areas. I'd like to add that in testifying here I may use the word "utility" to cover electric, gas and combined electric and gas companies, business and service.

Q. What is the nature and scope of rate regulation of utility companies, using the word "utility" in the same sense as you are using it? A. Every utility company must file rate schedules and proposed changes therein with the Department and all rate charges must be in accordance with such schedules. The Department has power to investigate, suspend and reject proposed rate changes. The Department also at any time may consider the propriety of existing rates and may order a change in the price of gas or electricity.

Q. Will you state briefly the nature and scope of Massachusetts regulation of service standards and extensions?

A. The Department has the power to establish safety and service standards for utility companies and to require line extensions in appropriate cases. The Department may order a utility to supply gas or electricity in bulk or otherwise upon reasonable terms. The Department may order an improvement in the quality of the gas. The Department is [1358] charged with the responsibility of inspecting and regulating the gas distribution as to quality, purity, calorific standards, storage, transportation and techniques of distribution. The Department has powers to determine the accuracy of gas and electric meters. It is authorized to investigate all accidents.

Q. What powers does the Department have as to accounting, records and reports? A. The Department has the power to prescribe and has prescribed uniform systems of accounts which must be followed by utility companies.

I might point out that while our uniform systems are not identical with those of the National Association of Railroad and Utility Commissioners or of FPC, they embody many

of the same principles. The Department may examine all physical properties and all books, records, documents and other papers of utility companies. Utilities are also required to supply annually, on forms prescribed by the Department, full information regarding their condition, management and operation, and from time to time such other relevant information as the Department may request.

Q. Will you describe generally the nature and scope of Massachusetts regulation of transactions and relations between affiliated companies? A. The Massachusetts statutes define an affiliate of a utility company as one which controls the utility of [1359] or is under common control with it or which stands in a relation with it which is characterized by an absence of equal bargaining power. This broad definition obviously includes not only commonly controlled utility companies but also affiliated service companies and holding companies. The Department is empowered to supervise all such affiliates with respect to their direct or indirect relations and dealings with utility companies and to examine the books, records and physical properties of affiliates or to require them to make annual or periodic reports on forms designated by the Department. The Department also exercises control over contracts between utility companies and their affiliates.

Q. What powers of regulation does the Department have over utility financing? A. The Department has and exercises power to regulate the issuance of securities by utility companies. Department approval is required prior to the increase and issuance of stock, bonds or other evidences of indebtedness with maturities of more than one year. Prior to approving any stock or debt issue the Department must find that the proposed issue, in amount, is reasonably necessary for the corporate purpose indicated by the petitioners. With respect to stock the Department may reset the sale price if it determines that the price fixed by the

Directors is so low as to be inconsistent with the public interest. Bonds may be issued only up to an [1360] amount equal to the aggregate of surplus, paid-in capital stock and cash premiums thereon and must be sold at competitive bidding unless we grant an exemption. The Department may order the correction of any capital impairment or inadequacy in the provision made for depreciation. Also in the area of financial regulation, no utility company may loan its funds or invest in the securities of others without approval of the Department.

Q. Mr. Chairman, what are the Department's powers with respect to the sale and purchase of utility properties and to mergers and consolidations? A. A utility company may sell its properties to another or merge or consolidate with another, but only with the approval of the Department after its determination that the transaction and the terms thereof are consistent with the public interest.

Q. Do Massachusetts statutes permit a gas company to merge or consolidate with an electric company, or vice versa? A. Yes. Such mergers or consolidations are permitted under the same statutory standards as apply to similar transactions involving only gas companies or only electric companies. The result of such a merger or consolidation is what we call a combination company, that is, a single company doing both an electric and a gas business.

Q. Does Massachusetts law permit the organization of a new [1361] company with charter power to do both a gas and an electric business? A. Yes. Such a company may be organized provided the Department approves.

Q. Is it lawful in Massachusetts for a combination company, that is, one doing both a gas and electric business, to separate by selling off either its gas or electric properties and franchises? A. Yes. Here, too, the same statutory standards apply as in cases of merger; that is, the DPU approves the separation only after finding that the trans-

action and its terms are consistent with the public interest.

Q. Mr. Lang, I have asked you to give the regulatory powers of the Massachusetts Department of Public Utilities in various areas. Do you have other powers? A. Yes, but I think we have touched on the principal ones—particularly the ones which pertain to the joint versus separate operation of the gas and electric businesses.

I might add that our powers to regulate mergers, et cetera, are supplemented by our power to regulate companies extending their business into other cities or towns. The franchise right to do business in a given area is a matter governed by the Massachusetts laws and our regulations.

Q. In your opinion are the statutory powers of the DPU adequate to regulate effectively the gas and the electric [1362] companies in Massachusetts? A. Yes. Massachusetts has always been a leader among the States with respect to comprehensive regulation of utility companies with the goal of assuring satisfactory utility service, reasonable rates and a fair return to investors, and in my opinion the present regulatory pattern is entirely adequate to protect the public interest.

Q. Are your regulatory powers exercised only at such times as formal cases are brought before your Department, such as rate cases, financing cases, merger cases, et cetera? A. No. At the time of any principal case our attention of course is focused upon the particular issues involved, but our regulation of the gas and electric businesses in Massachusetts is constant. We have accountants, engineers and lawyers on our staff who are constantly reviewing and analyzing the various reports and information which are filed with us and who take frequent trips visiting and investigating the utilities under our jurisdiction. We are the regulatory officials to whom the public can come for information on the utilities and we have a constant flow of calls and visits from State and local officials as well as from

the public. Our regulation with the utility business is a continuing day by day affair.

Q. You mentioned a few minutes ago that there are single business gas companies which are not combination gas [1363] and electric companies but are under common control with one or more single business electric companies. How many gas companies in Massachusetts are either combination gas and electric companies or straight gas companies under common control with electric companies?

A. Out of 26 companies doing a gas business in Massachusetts, 16 are either combination gas and electric companies or gas companies under common control with electric companies.

Q. Is it against the Department's policy for both gas and electric businesses to be carried on by combination companies or by single business gas companies and electric companies under common control? A. No. Of course, we consider each case on its own merits in the light of the respective interests of the consumers, the investors and the public. But in the absence of compelling reasons to the contrary we would not oppose the combination operation of the gas and electric businesses?

Q. I take this to imply that in Massachusetts joint ownership or operation of gas and electric utilities is in no way contrary to public policy? A. That is definitely so.

Q. Referring now to combination companies alone, has it been the experience of the Department that regulation of the gas or electric operations of such companies has been hampered by the fact that in such organizations the two utility [1364] services are rendered by one corporation? A. No. Regulation of the gas and electric operations of combination companies has been fully as effective as regulation of single business gas or electric companies. The uniform systems of accounts require separate accounting for the two departments of a combination company. In

rate cases involving combination companies the Department has always taken the position that rates for service furnished by the two divisions of a combination company must stand on their respective merits as separate proceedings regardless of the overall earnings of the company. Other aspects of regulatory control are equally unobstructed by the fact of combination.

Q. From the point of view of the regulatory agency of the Commonwealth, are there benefits resulting from the gas and the electric businesses in a given area being carried on by one combination company or by two separate companies under common control?

In answering this question you might refer to the situation of the eight gas companies which are a part of the NEES system. A. We recognize the economies of the eight gas companies being part of the NEES system. We further recognize that some of these economies flow from the fact of joint operation with the electric business and some of them flow from [1365] the fact that the gas companies are part of a large organization with a reservoir of personnel, property and funds. We are aware of the financial standing which the NEES system has and of their experienced executives and specialists who are able to effectively handle the complex matters that arise from time to time and who participate in the development of new methods and procedures.

Q. Do you find the regulation of companies as subsidiaries of NEES to be harder than it would be if they were independent? A. On the contrary, we find it easier. Of course, it is obvious that our problems are eased if we can work out a situation once for a group of companies rather than once for each of several companies. But in addition we find that working with NEES officials and personnel enables us to develop sound policies applicable to both gas and electric operations. If the gas properties were to be

separated from the NEES system we would lose the benefit of the skills and knowledge of the NEES personnel. Not only would our regulatory problems increase, but our regulation would be less effective.

Q. Have you found the NEES system in so far as its Massachusetts properties are concerned—both gas and electric—to be so large as to impair the advantages of localized management, efficient operation or effectiveness of management, efficient operation or effectiveness of regulation? [1366] A. We have not.

Q. Do you feel that the combination of the gas business with the electric business within the NEES system has resulted in one business being suppressed or slighted in favor of another? A. We do not. In fact, our experience with the NEES subsidiaries indicates that each business has been aggressively developed and efficiently operated. I suppose the best evidence of this is that the gas and electric businesses of the NEES system have each grown at a rate which is good for our area.

Q. Mr. Chairman, have you been in attendance at these hearings since they reconvened on May 18, 1960? A. I have.

Q. Does the testimony which you have heard alter your Department's position as stated in the notice of appearance? A. No. All of the testimony is consistent with our own conclusions as to the importance of retaining every possible economy for these gas companies in Massachusetts and confirms our opinion that keeping the gas and electric together is one sure way of continuing real economies.

Q. Would you tell us the basis of your Department's conclusions? A. Yes, but to understand what it would mean to have [1367] these eight companies taken out of the NEES System I will have to say a few words about the particular situation of the gas business in New England. We are at the end of the gas pipeline and the cost of purchased gas is higher than in any other part of the country. The comparative figures which have been intro-

duced to show this merely set forth graphically the basic situation of which our Department is acutely aware and with which we are seriously concerned, for they show that the whole structure of the gas business in New England is different than in other parts of the country. Not only do the gas distribution companies in Massachusetts pay substantially more for their gas than companies in other areas, but in addition they have other problems. Because there are no natural storage facilities and the cost of above-ground storage is prohibitive, Massachusetts companies cannot obtain the benefits of phasing their purchases and sales of gas in the most economical way. What it means is that our companies have to buy proportionately more gas at the high demand rate level than is true of companies in other parts of the country which have storage facilities. It is a serious problem.

It is also true that oil prices are relatively low in Massachusetts—naturally enough because of easy access to ports. This simply means that the Massachusetts gas distribution companies subject to the control of our [1368] Department are in an economic squeeze for the principal market—that of home heating—a unique position, in these United States, for a gas distribution company to be in.

Q. What is the significance in this proceeding of what you have just said, Mr. Lang? A. Well, I would summarize it this way: Of course, you can distinguish one part of the country from another on all sorts of bases—the rates they pay for different fuels, physical characteristics and other relative advantages and disadvantages. This is one of the economic facts of life which anybody in this business and any regulatory authority lives with. However, the difference in the economic position of gas companies in Massachusetts from those in other parts of the country is, in our opinion, not a difference in degree but a difference in kind.

Q. What do you mean by that? A. In other parts of the country—even for example in the New York area—there is a significant margin between the cost of gas purchased by the distribution companies and the prices at which it can be sold. When you get to New England the margin has become so narrow that there is simply no cushion. Any loss of economy must be reflected either in increased rates or cutting down of service. And the competitive situation is already so tight for gas that any rate increase is a most serious matter.

[1369] Q. But it is true, is it not, Mr. Lang, that there are gas companies which are operating successfully in your area without being part of a system such as NEES? A. Of course that is true—although the word “successful” is a relative matter. The point is that each of these gas companies has its own particular background and history, its own problems as to franchise areas, expenses, and its own standards as to service.

Taking into consideration the problems and situations in which they have developed over the years, these eight gas companies today generally operate on a sound efficient basis under our supervision and regulation. But, we do have economic problems with some gas companies, as might be expected in this area of intense competition with which the gas companies are faced.

One of our gas companies in the Connecticut Valley has recently been through bankruptcy. It has since been converted to natural gas and taken over by another gas company in the western part of the Commonwealth.

In other cases it is obvious that some of the independent companies suffer from not having the economies of being part of a system such as the NEES system.

We are satisfied that in this proceeding the only fair test for considering the effect of losses of economies is to

look at the eight NEES gas companies as they stand today.

[1370] Q. More specifically, Mr. Lang, on what basis is your Department concerned about the problem of losses of economies which would result from severance of the gas companies from the NEES system? A. I think it is obvious from what I said. Without an adequate margin to cover loss of economies, I would expect that the gas companies would have to ask for rate increases. If they did and such increases were granted, their competitive positions with other fuels would be even worse. This is a vicious circle the results of which all of us recognize—for example it is one which we have witnessed with great unhappiness in connection with commuter service both in our area and in other parts of the country.

Quite aside from the competitive situation it appears to us that taking these companies out of the NEES system will impair the level of service they now can give their customers. There are a number of conveniences which consumers get from joint operation, but more important these companies as part of the NEES system get the benefit of specialized services which are of direct benefit to consumers and which would be lost by separation.

Q. Mr. Lang, are you familiar with the reports and testimony of Ebasco Services as presented in this proceeding? A. Yes, I am.

Q. Would you give us your conclusions on them? [1371] A. Yes. But, first, let me say that we have not made an exhaustive examination of the reports. However, on the basis of our review of them while these hearings have been in progress and on the basis of the testimony which has been given, I can say that the conclusions which Ebasco reached are about what we would expect from our intimate knowledge of the companies and their operations.

Q. Is what you have said about the effect of the loss of

economies applicable to the situation if the eight gas companies were operated on a combined basis as well as if they were operated independently? A. Yes, it is. Although the losses of economies would obviously be somewhat less, if such a combined operation were possible, the significant savings come from the combination of gas and electric in such areas as customer accounting, meter reading, and the like.

Q. Have you heard the testimony and reviewed the evidence in this proceeding with respect to the consolidated tax savings which would be lost by the gas subsidiaries of NEES if they were to be severed from the NEES holding-company system? A. I have. And it would be a substantial loss of savings which, under our rate-making principles in Massachusetts, would eventually be borne by the consumers. In setting the rates for these gas companies, we allow recovery of only those [1372] Federal taxes as are actually paid by them.

In other words, the consumers get the benefit of the consolidated tax savings.

Q. Now, Mr. Chairman, would you state your conclusions as to whether you believe severance of these companies from the NEES system is appropriate? A. We believe such severance would not be appropriate. As I understand it, there are three tests involved which are commonly referred to as the A, B, C, tests. It is too obvious to require elaboration that the area test is met. I can tell you with confidence and finality that regulation of these companies does not present any problem because of their inclusion in the NEES system—in fact as I have mentioned earlier—quite the contrary.

The heart of this matter seems to be whether substantial economies would be lost by severance. It seems to us that the word "substantial" must mean substantial in relation to the overall situation of the companies. Based

on what I have said earlier I think it is clear that we believe that the loss of economies which would result from removal of these eight companies from the NEES system—whether they went out independently or together or some one way and some the other—would be not only substantial but very substantial in relation to the position in which these companies find themselves.

[1373] Q. In the opinion of your Department would there be any offsetting advantages from severance? A. We are aware of the type of problem which the Public Utility Holding Company Act was designed to meet and the advantages sought from separate operation. These simply are not applicable to the situation of these particular gas companies, and therefore, we believe that no significant offsetting advantages would be realized.

Q. Would you then state, Mr. Chairman, what the position of your Department is? A. Yes. The Massachusetts Department of Public Utilities is strongly opposed to this Commission's entering an order severing or directing severance of these eight gas companies from the NEES system.

Mr. Murray: Thank you.

Your witness.

Cross Examination

By Mr. Nowlin:

XQ. Mr. Lang, referring to the notice of appearance and answer which was filed in this proceeding under your name, bearing the date of May 9, 1960, could you tell me what specific facts you had available to you which formed the basis of your statement that there will be a substantial loss of economies if the properties were separated from the NEES system? [1374] A. Yes. We had been in general discussion with representatives of the NEES system, with members of our Research and Rate Departments and

our Accounting Department for the loss economy and figured that the loss from consolidated operation of administrative force and accounting and meter reading would run substantially over \$700,000 or \$800,000. At that time, we were satisfied that would be the minimum figure from our judgment and talking with the men in the office. Since then and having in mind the Ebaseo report it runs somewhere between \$1.4 million under the least favorable circumstances to NEES and \$1.0 million on the other hand as I think page 40 of your Exhibit 91 for identification sets forth today.

XQ. At the time of your filing of notice of appearance, did you have available to you any report by members of your staff which formed the basis for this conclusion? A. No. It was in conferences between members of the staff and the Commission drawing on their intimate knowledge of the companies and their methods of operation. It was —put it this way—an inescapable conclusion that did not justify or require or warrant direct research at the time.

XQ. Would it be fair to say, then, that your staff or your Commission had not made an expert study of this problem on its own initiative? A. No, I don't think so. I say we make continuing [1375] studies. We are fully conscious at all points, we may not have developed precise mathematical reports but we were certainly fully conscious of the impact such an action would have upon the consumer economy of these gas companies.

XQ. None of those conclusions have been reduced to writing? A. No, they have not, no.

XQ. At the time you were preparing this notice of appearance, were you or your associates on the Commission familiar with the congressional policy underlying the adoption of Section 11 of the Act? A. Yes.

XQ. Pardon me—and the Commission's opinion inter-

preting the various provisions of Section 11(b)(1)? A. To a degree, yes.

XQ. You would not consider yourself to be an expert on the interpretation of Section 11(b)(1), would you?

Mr. Murray: Would you like him to define "expert," Mr. Witness?

The Witness: No.

Let me put it here if I may say that, for some fifteen years, I served as counsel to four or five Massachusetts legislative committees drafting acts, interpreting acts, and in the same period I have answered to some five different Governors on over one thousand pieces of legislation, [1376] interpreting and pointing out defects or imperfections to existing law that these related to.

So I believe I have a sense of the nature of the construction of the statute and the manner of its interpretation.

If I may, sir, digress for a moment, I am also aware of the over-dedication that staff members can have to the interpretation of a statute.

By Mr. Nowlin:

XQ. Is that from experience? A. Yes. I have had to reprimand several subordinates for looking at the law through a keyhole and causing terrific trouble when a broader approach and better perspective would eliminate it.

XQ. You still want your staff to develop a record on which the Commission acts on for intelligent judgment, do you not? A. Are you referring to the instant case?

XQ. I was talking about the staff. A. I am sure I do not understand the import of your question.

XQ. I think you made the statement that you had to get after the staff members for being too diligent. A. You are referring to that. That is not in this instant case, Mr. Nowlin.

[1377] XQ. Has the State Commission, Mr. Lang, gener-

ally been favorable to the mergers and consolidations of small utility companies in the State of Massachusetts? A. I wouldn't attempt to evaluate the judgments of former Commissions. There have been no mergers specifically, to my knowledge, that I was aware of. We have every confidence. We do not put the label of suspicion on our utility companies. They operate in a fish bowl. We have over 5,000 local officials that want to practically know the time the president reports for work in the morning and how they handle their vacations and overtime. Every detail and every aspect of the administration of these utilities is subject to constant inquiry and almost intrusion by members of the public, local elected officials and representatives to the legislature.

XQ. Frankly, Mr. Lang, what I was thinking about was the NEES system itself. I am not too familiar with the past history of NEES but if I recollect correctly there were some 40 or 50 companies in the NEES system at one time or maybe more. They have been reduced through mergers or consolidations down to quite a substantial number. Isn't that a fact? A. I couldn't agree with you. I couldn't disagree with you, sir.

XQ. Were you on the Massachusetts Commission at the time the Lynn Gas and Electric properties were separated a year or [1378] two ago? A. Yes.

XQ. Your Commission approved that separation, didn't it? A. Yes.

XQ. That creation of a separate gas and electric company? A. Yes.

XQ. Now, in determining the impact upon the public interest in Massachusetts, have you or your staff made any efforts to appraise any savings in the cost of capital if these gas companies were one company rather than eight? A. You mean one consolidated company rather than eight separate companies?

XQ. Either that or if you had them under one ownership and control and financed at the top. A. To ask me what is the cost of capital today is to ask me one question. To ask me what it will be a year from now is another question. We know there are advantages from group financing, from large sums being offered a single time, that there are advantages that way. We know this, too. If NEES system were to sponsor a financial offering that would probably have a better impact upon the market than a mere integrated eight companies.

We generally feel, from my experience and I have had eleven years in a bank, and my experience is that the larger offerings find a more select group of brokers and investors [1379] willing to go for them. The larger offerings generally do not reach the market unless there is a pretty good idea that they are going to be absorbed.

These companies are careful not to risk their reputation by not having an offering, except at a figure that is fairly comparable to similar sized offerings in other areas, about the same point in time.

XQ. The point I was trying to bring up is this.

As I understand it, these eight gas companies now finance their debt segment on each individual company, isn't that correct? A. Basically, yes.

XQ. Don't you think you would be more economical to raise the debt segment of their capital requirements if they were merged into one good-sized company than it would be to have eight separate companies? A. I believe that the reputation that the NEES has for sponsoring and constantly reviewing management is about the best guarantee that a purchaser of debt issues of one of these or all of them would have, and that separated from the NEES sponsorship they would not be in as favorable a situation as they are in today.

XQ. Have you given any consideration to the fact that financing the gas companies by NEES may, in effect, be a subsidization by the electric consumers to the benefit of [1380] the gas consumers? A. We have thought of it but we don't find any evidence of it.

If I may suggest at the moment I had this in my pocket. It is a letter from one of the State Senators and if I may read it into the record:

"Dear Mr. Lang:

"I have received many complaints from my constituents in Lawrence and Methuen with regard to the recent increase in the rate charged to consumers of Lawrence Gas Company. They are incensed at the fact that the rates were charged so arbitrarily without any hearing be held to allow the public to voice itself."

Actually those are purchase price adjustments under the contract which passed along with the natural gas increase to the Federal Power Commission. But that is the type of thing that we are constantly meeting. He will come down and I will spend a half hour or some members of the staff will go over all the papers and satisfy him that no public interest would have been benefited with the time the Commission consumed in having a public hearing because it would amount to impairment of already low earnings for them to absorb the loss.

XQ. I see. At the time you were preparing the notice of appearance and answer, did you have a copy of the Ebasco report which has been introduced in this proceeding? [1381] A. No, we didn't. We had been apprised since of the preliminary conclusions that seemed to be pointed up by the study. That came to us through the NEES officials. But we had not the formal report as we have it here today.

Mr. Nowlin: I have no further questions.

Mr. Murray: In the light of Mr. Nowlin's rather exhaustive cross examination, would it be out of order to ask if Mr. Lang could be permanently excused from these proceedings?

Mr. Nowlin: I think we could almost state almost certainly that that would be the case. I do not know of anything further to ask.

I assume if we had something important, Mr. Lang would be available.

Mr. Murray: If it were real important and it was going to jeopardize your position, we would come down here.

Mr. Nowlin: I do not anticipate that.

Mr. Murray: We take it, then, we are excused.

Hearing Examiner Ewell: With that understanding he will be excused.

(Witness excused.)

Hearing Examiner Ewell: Do you have another witness this afternoon?

Mr. Quarles: Yes, if we could have a short recess.

Hearing Examiner Ewell: We will take a little [1382] break at this time.

(Short recess.)

Hearing Examiner Ewell: All right, gentlemen.

Let us resume, please.

Mr. Vorenberg: Mr. Simes has not been previously sworn in this proceeding.

Whereupon,

JAMES F. SIMES

was called as a witness and, after being first duly sworn, was examined and testified as follows:

Hearing Examiner Ewell: Give your full name, please.
The Witness: James F. Simes.

Hearing Examiner Ewell: How do you spell that?

The Witness: S-i-m-e-s.

Direct Examination

By Mr. Vorenberg:

Q. Mr. Simes, what is your business address? A. My business address is 2 Rector Street, New York City.

Q. Would you outline your background and experience? A. I have a Bachelor of Electrical Engineering Degree from New York University. In addition, I have also taken courses in business administration at both New York University and St. John's University, Brooklyn, New York.

In 1936 I entered the employ of Brooklyn Edison Company [1383] of Brooklyn, New York, which subsequently was absorbed into the Consolidated Edison Company of New York Inc. Except for approximately 4 years in the Armed Forces during World War II, I spent 18 years in the Consolidated Edison Company. During that time I worked in the Sales Department and the System Engineering Department. Approximately one year was devoted to a training program which included working in electric generating stations, gas production plants, electric substations, gas holder stations, the Construction Department, both electric and gas, and the Service Department, both electric and gas.

In the System Engineering Department there were two bureaus, the Planning Bureau and the Forecast & Analysis Bureau. I worked on all phases of load forecasting and system planning for electric, gas and steam. I had many special assignments such as: the preparation of data for electric and gas rate cases before the New York State Public Service Commission; cost allocation studies of New York City subway system and all the railroads which were supplied by Consolidated Edison; studies of projected manpower utilization through a future 20-year period; operating cost analyses for various executives and department heads of the company.

In 1954 I left the Edison Company to enter the employ

of Compania Chilena de Electricidad, a subsidiary of American and Foreign Power Company in Chile, South America. [1384] I was Assistant General Manager of this operating company and during the year that I was in Chile, my primary responsibility was to examine each operating division of the company to optimize the organization and efficiency of operating, engineering, sales and commercial departments.

In 1955 I joined the New Jersey Natural Gas Company, a natural gas distributing company in the State of New Jersey. I was hired to form and organize the Planning and Development Department of which I was the Manager reporting directly to the President and with staff status. In this capacity I was responsible for the preparation of forecast of customer growth, sales and revenues; the preparation of operating and construction budgets for the three operating divisions of the company; determination of pipeline gas supply requirements; planning transmission capacity from pipeline sources to distribution centers; development of peak shaving manufacturing requirements and methods of meeting these requirements; general organizational planning for all departments of the company, operating, engineering, sales, commercial and general accounting. To accomplish this last phase of my duties, it was necessary for me to gain intimate knowledge of the operations of each department. For example, one study included the projected abolishment of one of the company's divisions and integration of all of its operations into one of the other divisions. This required merging all functions [1385] responsible to the division manager including operating department, sales department, customer accounting and collection, engineering and the service department. This study was actually put into effect. As a staff member, I acted in an advisory capacity to all of the executives of the company, including the Vice President in

charge of Sales and Commercial Operations, the Vice President of Operations and Engineering, the Treasurer, the Secretary, and the Director of Publicity.

I was responsible for the preparation and presentation of all data before State and Federal regulatory commissions. I have testified before the Federal Power Commission in the presentation of marketing company data in support of pipeline company requests for certificates of convenience and necessity. I have engaged in extensive negotiations with the FPC staff and pipeline companies in pipeline rate matters.

In the approximately five years that I worked for the New Jersey Natural Gas Company as Manager of the Planning and Development Department, I became involved with every single phase of the operation of a natural gas distributing company. For example, again, I was responsible for space utilization and planning both for company-owned properties and leased properties—I actively participated in several divisional and departmental moves which required reorganization of space in company-owned or leased office buildings [1386] plant buildings storeroom buildings, parking lots, garages and district stores, I was also directly involved in the site location, leasing of and space organization of district stores and also a service center. My department derived the allocation percentages for interdepartmental charges for jointly used space.

In February of 1960, I entered the employ of Ebasco Services Incorporated as a general gas consultant of the Management Consultation Division which is my present position.

Q. Mr. Simes, would you relate your role in the Ebasco study of the effect of gas company severance from the NEES system? A. In conjunction with other Ebasco representatives, I have made a detailed study of the services performed by the New England Power Service Company for the

operating subsidiaries of NEES and was primarily responsible for that section of the Ebasco Report relating to the Service Company.

In addition, I made a study of the gas division of NEES; the executive and administrative organization of all gas operating companies, and the intercompany billing for rentals of jointly used properties, and determined what the effect of severance would be in these areas. In all of this I was assisted by workdone by other members of the Ebasco team and, of course, we worked closely with NEES personnel throughout.

[1387] Q. What type of information did you review in this connection? A. All of the information which NEES personnel supplied as outlined by Mr. Quig was available to me at all times.

In connection with the study of the Service Company, we requested specific data for the year 1958 in regard to service contracts, specific requests for service by the gas operating companies, samples of actual bills rendered to gas companies, summaries of all billings in the year 1958 to the gas companies and specific information on payroll of certain types of employees.

In our study of the gas division and the executive and administrative staffs of the operating companies, organization charts and executive payroll data prepared by NEES personnel were extremely helpful.

With regard to the studies of intercompany billings for rental of jointly-used facilities, I had available detailed data which NEES personnel had supplied to the Ebasco team. What I have mentioned is of course only a small portion of the total material we drew on. Mr. Quig has suggested in general terms the type of information we based our work on and what he has said is applicable to my area of the study.

Q. Would you describe briefly how you accomplished the

studies and surveys in the area of your responsibility for [1388] the Ebasco report which has been offered as Respondents' Exhibit 58? A. In general, with regard to the Service Company, I interviewed each department head, and subordinates where necessary, to learn directly from each the organization and staffing of his department and specifically the services which his department was available to perform for the operating companies. Of course, these discussions also encompassed the departments such as General Accounting, Office Service, and Building Service, which perform work for the operation of the Service Company itself.

In making the studies of the Gas Division and the executive and administrative staffs of the operating companies, I talked at length to the executive head of the Gas Division and his assistants. During physical examinations of all the gas company properties, I talked to each local vice president and other local executives as I deemed necessary. With respect to the larger properties, I talked to superintendents and department heads to obtain more detailed information with regard to company operations.

In order to carry out the assignment on rentals I made inspections of all the jointly used properties, studied generally the areas where relocation would be required in the event of severance, and discussed the general range of rents with representatives of local chambers of commerce.

[1389] In general, with respect to all of the work I did, I reviewed my findings and conclusions with other members of the Ebaseo team and others in Ebaseo who are also familiar with these problems. As Mr. Quig has stated, we consulted at all stages of this work with NEES personnel.

Q. Would you describe in more detail the section of the Ebaseo report, that is again Respondents' Exhibit 58, relating to the New England Power Service Company? A. First of all, as Mr. Quig has also stated, the Ebaseo report used

1958 as its test year. As NEES witnesses have already pointed out, the organization of the Service Company is different today from what it was in 1958 as a result of an order of the SEC dated December 30, 1959. However, except for the executive and administrative services now offered, the services offered and performed today are the same as those offered and performed for the operating companies in 1958. The Service Company section of the report deals with the organization of the Service Company as it existed during 1958.

From pages 1503 to 1513 in that section of the report are set forth the number and type of staff in each department and a brief summary of the services performed by each department. There are explained in subsection C, pages 1513 to 1515, the methods of billing each operating company for services performed and the various methods of allocating charges [1390] to the individual companies.

Included in the report, in subsection D and related tables, is an analysis of the actual 1958 billings to the gas companies for services performed by the Servicing, Engineering, and Construction divisions.

Q. Mr. Simes, did you draw any conclusions from your analysis of the accounting methods of the Service Company and from the actual 1958 billings? A. Yes, I did. I was impressed by the efficient accounting procedures established and maintained by the Service Company to insure correct and proper charging of costs to the operating companies. I examined the Overhead Ledger of Administrative and General Expenses of the Service Company and the Overhead Ledgers of several departments. These ledgers record in detail the individual items of expense which were allocated as overheads.

In regard to the Construction Division, records were maintained in such a manner as to allocate particular overheads such as use of tools and insurance and taxes to the

types of construction jobs which should bear such overheads.

In general, as a result of my examination and analysis I am satisfied that the manner in which accounting records were maintained and the methods of allocation which were used, resulted in fair and reasonable charges of Service Company [1391] costs to the operating companies.

Q. Would you explain Section II of the Service Company Report; namely, the effect of severance on the Service Company? A. The effect of severance on the Service Company as outlined in the Ebasco report is based on an analysis of each division's staff as it existed in 1958 and of the services performed for the gas companies in that year.

Most of the employees in the Servicing Division were trained and skilled in both the electric and gas utility problems and did not work exclusively on one or the other. In the Construction Division there were only 34 men who worked on both electric and gas jobs and another 2 who worked exclusively on gas; and the balance of the construction forces worked exclusively on electric jobs. In the Engineering Division almost all of the personnel were primarily concerned with work for the electric companies and no one specialized in gas problems because the gas companies had their own engineering group in the gas division.

It is about impossible to identify particular individuals or job classifications for reduction in the event of severance. Consequently, the projections of reductions in personnel by job classification were based largely on a study of the total workload of each department and the type of personnel who performed that work.

[1392] If severance of the gas companies were to become an accomplished fact and a relatively small part of the work load of each department lopped off, it would be a difficult task for management to effect a reduction in per-

sonnel because most of the employees are well trained and experienced in their respective fields. In my opinion management would of necessity have to use seniority as a basis with the result that younger, therefore less experienced and lower paid employees, would be released.

Q. Would you please outline in some detail your conclusions on the effect of severance by divisions? A. Yes, and I will start with the Servicing Division since the major part of the services were performed by that division.

Q. How did you arrive at the particular job classifications which would be involved in a reduction in the Servicing Division? A. As I have explained previously, the primary basis of my estimate of possible reduction was the total work load of the particular departments. In the case of the Audit and Methods Department, they had three field supervisors and seven traveling auditors on the staff who performed internal audits of all the operating companies of the NEES system. Of course, the length of time required to complete each audit will vary with the size of a company but, in general, the [1393] audit staff is roughly geared to the number of companies to be audited and the detail which management and the independent public accountants requires to be audited. Giving effect both to number and size of the respective companies, I concluded that the elimination of annual audits of the gas companies might possibly relieve the need for two of the ten men involved in this work and that these would be the newest and lowest paid individuals in this group. Needless to say, a field supervisor with years of training and experience would not be considered for release.

Q. On what basis did you make the projected reduction in the Purchasing Department? A. In the case of the Purchasing Department, I concluded that one purchasing assistant and two clerks might possibly be released. In 1958 the Purchasing Department had seven purchasing

assistants, which I shall call buyers since it is a term which describes their functions and with which I am more familiar. None of these buyers purchase materials, equipment or fuel exclusively for the gas companies. For example, the man who buys fuel deals with companies which furnish all grades and types of fuel and byproducts and he would be the man to contact companies whether it was for electric generating stations or for gas plants. The same situation applies to steel purchases, merchandise, construction equipment and miscellaneous materials and supplies.

[1394] On the basis of total workload, approximately 13 per cent of Purchasing Department billings were charged to the gas companies in 1958. Using this as a basis, I decided that in the event of forced reduction the Purchasing Department would separate one purchasing assistant and two clerks—actually I have my doubts that such a reduction would be workable.

Q. Mr. Simes, will you now tell us the basis on which you projected the reduction shown on the Plant Accounting, Insurance and Medical Departments? A. In the Plant Accounting, Insurance and Medical Departments I have indicated a possible reduction of four people—an administrative assistant, an insurance clerk, a part-time physician and a secretary. As for the administrative assistant, I believe that one of the two staff members working on employee suggestions could possibly be separated since the work of that group is a function of the number of employees and the suggestions which they submit. In the Insurance and Medical groups I determined that reductions might be able to be made in areas which are related to employee functions. And it is logical to believe that if a part-time physician could be separated that his secretary would no longer be required.

Q. Will you tell us now about the figures for the Treasury, Corporate and Tax Departments? A. In the Treasury

Department I have projected a possible reduction of two accountants and one clerk. In my grouping [1395] under the Treasury Department I included the seven accountants under Treasury on page 1524 of the report and the four accountants under General Accounting on page 1525 of the report. In the event that reduction became necessary, I would expect that one accountant from each group might be separated and that one clerk from the staff of the General Accounting group might be separated. This projection is based entirely on a reduction in workload due to severance.

The effect of severance on the Corporate Department would, in my estimation, result in the possible separation of one of the 10 corporate attorneys and one clerk. This possible reduction is based on the dollar volume of billings performed by the Corporate Department for the gas companies in relation to the total amount of work performed by the Corporate Department and this relation in 1958 was approximately 11 per cent. The decision to project a reduction in the clerical staff by one was based on the relatively close relationship of clerical work to the number of attorneys.

In the Tax Department I have projected the possible reduction of one tax accountant of the seven accountants and technicians that were on the payroll in 1958. This was based on the relationship of operating revenues of gas companies to the operating revenues of all operating companies of the NEES system.

Q. How about the figures for the Safety and Rate Departments? [1396] A. In the Safety Department I have projected a reduction of one of the three safety assistants who were on the staff in 1958. This possible reduction is based on the number of companies which the Department serviced. We chose the number of companies as a basis because of the amount of time spent in field visits to the various companies and the statistics and reports which are maintained

on a company basis.

The possible reduction of one rate technician in the Rate Department was based on the number of companies and the complexity of their rate schedules.

Q. Mr. Simes, will you explain the other figures with respect to the Servicing Division as shown in the table on pages 1517 and 1518? A. As you will see, the figures on those pages show the total projected reduction due to reduced payroll costs, including the downward adjustment to reflect 1958 salary levels and the adjustment for payroll taxes, fringe benefits and employee expenses. As shown, the total amount due to personnel reduction is \$102,200. In addition to these payroll savings, we also took into consideration possible reductions in miscellaneous costs such as student training and the System house organs. Our projection of the maximum reduction in costs that could be effected with respect to the Servicing Division is \$116,200. [1397] Q. How confident are you that these reductions could actually be made in the Servicing Division? A. Not very. By and large the services performed in this Division are specialized and you simply cannot assume confidently that you can make a pro rata reduction of personnel because you are reducing approximately 13 per cent of the services which are performed by this Division. If severance actually took place, it would not surprise me to find that it would be impossible to make some of the reductions we have projected without impairing the ability of departments in this Division to perform their necessary services for the remaining electric companies.

Q. Would you now give your conclusions on the effect of severance on the Construction Division of the New England Power Service Company? A. Here again my conclusions are based on the amount and type of construction work performed by the Service Company for the gas companies in the year 1958. At that time, the Construction Division

had on its payroll a gas holder mechanic and helper who worked almost exclusively for the gas companies and were actually scheduled by the gas engineer of the gas division. In my opinion, these men could be dropped from the Construction Division payroll in the event of severance.

The determination of other reduction in the Construction Division was more difficult. In 1958, there were [1398] approximately 34 men as outlined in the report engaged in construction and maintenance activities of both a gas and electric nature. Since all of these men, working foremen, welders, utility workers, are skilled mechanics, any organization would be loathe to part with them. However, in our efforts to project the effect of severance on the Construction Division, we concluded that there could be a forced reduction of a welder and 3 utility workers. Certainly, no consideration would be given to reduction of working foremen with the years of experience in utility construction which such jobs require.

Since no materials except for expendable hand tools are charged to operating companies by the Service Company and no material amount of equipment relates specifically to gas operations, we have given consideration only to payroll reductions in the Construction Division. The result of our analysis indicates a payroll saving to the Construction Division due to forced reduction of \$51,100.

Q. Would you explain your conclusions regarding the services provided by the Engineering Division? A. Our analysis of the billings of the Engineering Division and study of how that Division operates indicated that there would be virtually no slack in the work of that Division if the gas companies were removed from the System. As far as blanket requests were concerned they related primarily to system-wide engineering studies. The blanket requests that [1399] related only to the gas companies were not of a significant amount. As far as specific requests are con-

cerned, almost all of these related to right-of-way surveys performed by personnel who are used almost exclusively on electric operating company matters. Even making the most conservative assumption as to the effect of severance we could not see any basis for projecting a forced reduction in this Division.

Q. Would you summarize your estimate of these possible reductions and their significance in assessing the effect of severance? A. The total billings in 1958 to the gas companies were approximately \$317,200. Subtracting from that our projection of possible forced reductions in the Servicing Division of \$116,200 and \$51,100 in the Construction Division leaves a balance of \$149,900 to be absorbed by the other companies in the NEES System. Of this amount, \$37,500 would remain in the Construction Division and \$11,300 in the Engineering Division. Almost all of these amounts would be charged to Plant accounts. It is our best estimate that after charging the proper amount to Plant accounts, the net effect on Income accounts of the other companies would be approximately \$100,000. On page 1520 of the Service Company report, there is an estimate of how the increased cost would be absorbed by the remaining individual companies.

Q. Would you explain how you spread the increased cost [1400] among the electric operating companies? A. Of course, the manner in which this cost would be absorbed by the electric companies would depend solely upon the amount of work which they request the Service Company to perform. The method we used was based on the gross operating revenues of each individual company in the year 1958.

Q. Mr. Simes, would you now describe in more detail your survey of the gas division of NEES? A. The gas division of NEES was formed shortly after the arrival of natural gas in the area to provide specialized executive, engineering and sales services for the gas companies in

order to develop the full earnings potential of natural gas distribution. In general these services comprised the areas of management, marketing and supply, operations and engineering, and sales promotion.

The executive head of the gas division was the president of all of the Massachusetts gas companies except Lynn. In the year 19⁵⁷ he had reporting to him four assistants.

One of these assistants performed management services by working with operating company managers on matters of common policy and operations; by representing the individual companies on industry committees concerned with such activities; and by maintaining good public relations. He was the responsible executive in the absence of the President of the gas companies.

[1401] In the area of marketing and supply, another assistant was responsible for forecasts of customers, sales, revenues and earnings; preparation of operating budgets; development of new markets for gas; gas supply from pipelines, matters before the Federal Power Commission in pipeline certificate cases; preparation of general statistics; and representing the companies in retail rate matters before the Massachusetts DPU. In addition he worked with operating company managers on large volume gas sales contracts both firm and interruptible.

Another assistant was responsible for the general area of sales promotion and merchandising. This executive worked with the company managers and the sales managers to establish appliance sales quotas, organized sales campaigns and develop and administer bonus plans for salesmen. He also prepared promotional and advertising budgets and developed programs for market research and advertising in conjunction with an outside agency. He worked with other gas companies in developing and coordinating area-wide programs to promote the use of natural gas.

In the area of operations and engineering, another

assistant was responsible for production, distribution, utilization, engineering and construction; preparation of construction budgets for the individual companies; and local personnel and labor relations in the operating departments. He was also [1402] responsible for the direction and supervision of the Gas Engineer and Coordinating Engineer.

The Gas Engineer was responsible for the design engineering and construction of major additions to production, storage and distribution facilities, telecontrol and telemetering equipment. He was also responsible for determining what maintenance was required and scheduling the maintenance work on storage holders, telecontrol and telemetering.

The Coordinating Engineer was responsible for production and distribution, operating procedures and emergency operating plans; preparation of economic studies, operating and construction budgets; determination of peak shaving requirements and the adequacy of production and distribution facilities; and he made studies of the feasibility of new production processes and equipment. He coordinated these activities with the Gas Engineer and the company Vice Presidents and operating superintendents.

Q. In general, Mr. Simes, would you indicate for us the relative areas of responsibility of the Service Company and the gas division? A. Both the gas division and the Service Company are set up to perform specialized functions. However, a greater degree of efficiency in certain areas, such as sales, operations and engineering in particular, can be obtained through specialization in gas company problems. In these areas that I have mentioned, [1403] it is possible for a gas division which is responsible for 8 local companies to maintain a high load factor in the use of specialized talent. In other areas, it is obvious that maximum economies can be realized on a system-wide basis, because the same general skills and knowledge are required for service

to electric and gas companies. An example of this would be the purchasing department.

In fields such as taxes, auditing, methods and procedures, plant accounting, medical and insurance, corporate services, et cetera, such a high degree of specialization is required that it is virtually impossible for the gas companies alone to set up departments in which a high load factor could be maintained.

Q. In general, do you believe the Gas Division represents an efficient and sound way of performing the centralized functions for the gas companies which you have referred to?

A. Yes, I do. I have reviewed the roles of each of the gas division personnel and have satisfied myself that it makes more sense for them to be performed on a centralized basis for all gas companies, than to have them performed by each company. For example, I made a physical inspection of each one of the operating companies at which time I examined the "take points", standby and peak shaving plants, shops, garages, sales floors and accounting centers. In all cases, the condition of the physical plant was excellent. Every [1404] phase of the physical operating plant spoke well for the engineering which went into the design and construction. Maintenance obviously had been carefully planned and executed. The portion of the plant which is underground, and therefore not available for observation, is also in good condition as evidenced by the relatively low figure of 4.5 per cent for unaccounted for gas for the entire system.

In answer to questions regarding corrosion control, I learned that cathodic protection and wrapping of pipe were used where necessary. The engineering group of the gas division had made soil studies to determine where pipe needed protection and protection was provided only in those areas rather than spending money indiscriminately for protection.

This and other similar studies spoke well for the services rendered by the engineering group of the Gas Division to the individual operating companies, and I found similar excellence in other parts of the Gas Division.

Q. Mr. Simes, in your inspection of the gas properties, did you study the executive and administrative organization of the local companies? A. Yes, I did.

Q. Would you briefly describe the executive and administrative organization of the operating gas companies? A. Mr. Dalbeck has described in considerable detail the management setup of each of the operating gas companies [1405] and my own studies confirm what he has said.

In general, each gas company had a Vice President and General Manager who was directly responsible for the operation of his particular company. He had to perform or direct and supervise the performance of the functions of production, distribution and utilization; he was responsible for maintaining good public relations and making contacts with municipal authorities; he handled personnel and labor problems of a minor nature; he was responsible for residential, commercial and industrial sales activities; and he was responsible for customer contact and relations.

In the larger companies the Vice President and General Manager was assisted in the performance of these duties by staff assistants whereas in the smaller companies he had to perform most of these duties himself.

Q. Will you indicate to us the process by which Ebaseo went about projecting the executive and administrative staff which would be required for each of the 8 gas companies if independent? A. In the event of severance each gas company from the largest to the smallest would require top level executive and administrative personnel. Both the number and caliber of these executives will vary with the size of the company. Rather than repeat the data that is

already included in the Ebasco report, I would like to take one company as [1406] an example.

Since the North Shore Gas Company has been used as a representative example by Mr. Quig, I will use it also to demonstrate our methods of determining executive and administrative staff requirements. Obviously there has to be a President as chief executive officer who would be responsible for every function of the company. In a company the size of North Shore, the problems are too numerous and complex for one man to supervise them directly. He would need a minimum of 3 other company officers to supervise the general areas of operation, financing and accounting, and corporate matters. In the pro forma organization of North Shore, these officers are a Vice President, a Treasurer and an Assistant Treasurer who will also be the Corporation Clerk.

Q. Will you indicate the responsibility of the Vice President? A. The Vice President would be directly responsible for production, distribution and utilization functions; preparation of operating and construction budgets; maintenance of all physical property; preparation and presentation of data before State and Federal regulatory bodies and employee and labor relations including contract negotiation.

In addition, this executive in a company of this size would have general responsibility for sales and merchandising operations although the general sales policies would [1407] undoubtedly be a direct responsibility of the President. In the absence of the President the Vice President would perform the duties of the chief executive officer.

With the wide scope of responsibility for this executive, it would be necessary to provide him with an administrative assistant. In these days of increasing emphasis on employee relations, the administrative assistant is necessary to relieve the top executives of the day to day labor and

personnel problems which require countless meetings with labor representatives.

In addition the administrative assistant would have to provide liaison between the various departments reporting to the Vice President, help correlate the data required for preparation of budgets, make special studies of particular problems that arise in day to day operations, assist in preparing operating procedures for the various departments under the supervision of the Vice President.

Q. Who would be responsible for treasury functions in this new company? A. The office of the Treasurer would be responsible for all financial and accounting functions; in the former category are included determination of financing requirements; arrangement for debt and security issues; preparation of necessary regulatory and investor data in connection with financing. In the area of accounting the Treasurer would be directly [1408] responsible for general accounting, plant accounting, and customer accounting; preparation of Federal, State and local tax information; preparation of required reports to regulatory bodies; development of proper accounting practices and procedures; preparation of cash forecasts; and control of both operating and construction budgets.

The Treasurer would be assisted by an individual with the title of Corporation Clerk and Assistant Treasurer. In the absence of the Treasurer he would be the responsible financial officer. His direct line duties would include supervision of general accounting, customer accounting and stores accounting functions; and his staff duties would include determination of insurance coverages and handling of day to day insurance and claim matters; handling of stockholder matters and preparation of the annual report; recording of minutes of the meetings of the directors and stockholders; and performing other duties of a corporate nature at the direction of the President or the Treasurer.

Q. What other administrative staff would be necessary for this company? A. In addition to the general officers of the company, the administrative staff in a company the size of North Shore would include a Sales Manager, an Engineer, and a General Superintendent.

The Sales Manager would be responsible for the [1409] executive of general sales policies as determined by the President or Vice President of the company. He would be directly responsible for sales promotion; advertising and merchandising. In these areas, his duties would consist of development of sales campaigns, supervision of the sales force; development of sales quotas and commissions and bonuses of the salesmen; determination of quantity and type of merchandise to stock and display; direction of home service activities; development and coordination of appliance dealer activities; preparation of advertising material; promotion and development of commercial and industrial sales of gas; and the promotion of new uses of gas and gas equipment.

The Engineer would report directly to the Vice President and would be responsible for all technical requirements of the company. He would be responsible for forecasting load growth and planning to meet that growth; the design and construction of facilities as required for expansion of the gas system; preparation and preservation of maps and records; acquisition of required rights-of-way; study of new types of gas equipment for production, distribution and utilization; determination of control and safety requirements; determination of type and size of communication equipment required and preparation of data for licensing thereof; preparation of standards of operative procedures both for a normal and emergency operation.

[1410] The General Superintendent would report directly to the Vice President and would be responsible for the production, distribution and utilization activities of the com-

pany. In the case of a company the size of North Shore, he would have a production or supply superintendent and a distribution and utilization superintendent reporting directly to him. He would be directly responsible for the operation and maintenance of production plants, transmission and distribution lines, metering and regulating stations; testing and repairs of customers' meters; supervision of automotive equipment and the maintenance thereof; maintenance of odorization levels; services of customers' equipment; supervision and inspection of field construction.

Included in the executive and administrative staff are the necessary technical, secretarial and clerical help required by the various executive and department heads.

Q. You have described in some detail for us the particular executive and administrative functions which would have to be performed in these new companies and have indicated to us how these functions would be performed in the case of North Shore. Will you describe generally the basis for these determinations? A. First, we had to determine what the functions to be performed by an executive and administrative staff were. This was largely based on a thorough knowledge of the business [1411] and operations of each of the companies and our own knowledge and experience as to what jobs had to be performed to carry on such operations. Of course, one of the helpful guides in making this determination was the present method of operations of these companies. We also considered the organizations of other similar gas companies which, like the present organization of this company, served as a check or test of our conclusions as to what might be necessary in different areas—subject in each case to molding the organization to the particular situations of North Shore as if it were operating on an independent basis.

The next step was to determine what personnel were necessary to perform these functions. Here again the

process was roughly the same. We drew heavily on our own experience, testing our conclusions against the present set-up of these companies and other similar companies.

Q. Is the process which you have described the one you used in arriving at your projections for each of the 8 gas companies? A. Yes, it is. Of course the requirements would vary according to the size and business of the company.

Q. Would you explain how the salaries of the pro forma executive and administrative staff were derived? A. In general, after the determination of the size and type of staff required for each individual company, [1412] we considered 3 factors that normally determine salaries at this level. First, the duties and responsibilities of each officer and department head in relation to the size of the company being staffed determined the caliber of man required; second, consideration of the market from which this type of personnel must be obtained; third, the comparative salary levels in the New England area.

The determination of the first 2 factors was made on the basis of our knowledge and experience in the gas industry. The third factor, which is primarily a test of our conclusions on salary levels—was obtained from annual reports, of other Massachusetts gas companies to the Department of Public Utilities.

Q. Mr. Simes, in what you have said about management and administrative areas you have not specifically described the effect on the gas companies if they were to lose the services of the Service Company. Would you please give us your views on this?

Mr. Nowlin: Mr. Examiner, I think I have a standing objection to this line of testimony, haven't I?

Hearing Examiner Ewell: I think so.

Mr. Vorenberg: That is what I understood.

Hearing Examiner Ewell: That is the understanding.

By Mr. Vorenberg:

Q. Will you proceed with the answer? [1413] A. I would like to answer that question by reviewing the services provided by the Service Company for the gas companies in 1958 which I have analyzed.

First, in the area of purchasing and stores, the gas companies would definitely lose the savings attributable to bulk purchases, on which we have not placed a dollar value in the Ebasco report.

In 1958, the Purchasing Department of New England Power Service Company purchased approximately \$30,000,000 worth of materials and supplies exclusive of fuel which is purchased primarily for the electric companies. This is an enormous advantage when dealing with vendors not only in price but in obtaining scarce material, expediting delivery, and having many sources of supply available.

When purchasing is a part-time activity of a President or Vice President those companies would lose the advantage of being aware of many new products on the market and of being able to obtain quick and accurate price verification when making engineering estimates.

Q. What effect would the non-availability of the Audits and Methods Department have? A. Mystic Valley could afford an internal audit staff but the others could not. Of course all companies would require the services of an outside auditor. However, an outside auditor does not and cannot provide all the services of an [1414] internal auditor. A well-trained internal auditor provides a good check on first line supervision, he surveys the general housekeeping of field locations and he is generally in a position to test the efficacy of operating as well as accounting procedures.

In my opinion, none of the severed gas companies could afford to establish a separate systems and methods group on the _____. This will be an inestimable loss from the standpoint of developing efficient procedures, forms stand-

ardization, and in the area of machine accounting. Again, there are many consulting firms willing and able to supply services in regard to machine accounting equipment and uses; but in my experience, the smaller companies usually have to rely on the advice of the manufacturers which is not always adequate.

In the area of services provided by the Insurance Department of the Service Company, I believe the effect of the loss of these services on the gas companies will be covered in detail by another witness.

Q. What would the effect be of the loss of services of the Medical Department? A. The services arranged for or provided by the Medical Department would be impossible to replace by any of the gas companies. In particular, I mean the services of Dr. Roberts, the medical director of the Service Company Medical Department who has approximately 25 years of experience in the [1415] industrial medicine field. I do not doubt that the individual companies could obtain the services of various clinics and hospitals for check-ups of their employees but that is only part of the services rendered by this department. The systematic analysis of check-ups and the coordinated administration of the medical program generally is of prime importance.

Q. What about the loss of the Service of the Corporate Department? A. Of the services performed by the Corporate Department of the Service Company, undoubtedly some of them can be obtained by hiring outside legal help which has been reflected in the pro forma estimates. However, corporate law in regard to a utility corporation is a rather specialized field. The greatest loss to the severed companies will be in losing the services of attorneys with intimate knowledge of the gas companies and their operations with respect to State and Federal laws and rules

and regulations of various regulatory bodies which apply to the functioning of these utility companies.

Q. Will you now tell us about the effect of losing the Service Company's services in the personnel area? A. In my opinion one of the most severe losses to the gas companies would be in the area of personnel and employee relations. I think it is unnecessary to belabor the increasing importance of this area in the management of any business. [1416] Today unions have well-trained and expert help in their negotiations with management and it behooves management to have this caliber of help also.

The Service Company has men of such caliber with years of experience in negotiating contracts with unions.

Mystic Valley could afford a personnel staff. The other companies would have to depend on the Executive and Administrative staff to perform these functions and it would be several years before the individual gas companies would have men with the abilities and experience required for labor negotiations. They would also lose the value of sound judgment in development of employee relations programs which in my opinion have been very successful in developing a high level of employee morale throughout the NEES system. This observation of the level of employee morale has been gained from conversations with employees in all parts of the System and all levels of job classifications.

Q. What effect would severance have on safety matters? A. Most utility companies now have a safety director and in my experience even the smallest of gas companies manage to put someone in charge of safety programs. Unfortunately, however safety is usually put in the hands of an individual as a secondary duty to his line functions.

It is my firm belief that there are direct and tangible benefits from well-organized and well-executed safety [1417] programs. In this area the companies of the NEES System have done an outstanding job and I can only at-

tribute it to the dynamic and aggressive safety programs fostered, developed and policed by the Safety Department of the Service Company.

In support of this I would like to offer one statistic. In the year 1958, the average frequency of accidents per million man hours for the gas companies of the NEES System was 2.09 as against a national average for the gas industry of 8.07. 1958 does not happen to be an exceptional year. In every year but one in the last 6 years, the NEES System gas companies frequency average was less than that of the gas industry nationwide. This safety record has a dollar value because it has reduced the cost of casualty insurance over the years.

Q. How have you assumed tax and rate matters would be handled for the severed gas companies? A. The preparation of tax returns would be under the supervision of the Treasurers of the independent companies and the individual companies could hire tax experts to help prepare their returns. However, they would lose the assistance and advice of the Tax Department of NEPSCO which has years of experience in their particular problems and the availability of this advice on a day to day basis which is no further away than a telephone.

In the area of Rates not one of these gas companies [1418] is large enough to afford a Rate Engineer or Rate Technician and consequently rate matters would become secondary duties of management personnel. Of course, the services of such qualified people are available from many consulting firms which, of necessity, would have to be the source of such talent when rate problems arise for the gas companies. There is, again, however, the loss of the services of experienced and knowledgeable men of NEPSCO in the particular area of dealings with a local regulatory body.

In addition, there would be hesitation on the part of management of smaller gas companies to call in a consultant on small Rate problems which service is readily available from the Service Company.

Q. What about the services of the Publications Department? A. Some of the larger companies might be able to issue a house organ possibly on a bimonthly basis rather than the present monthly "Contact".

The main loss in this area, though, would be the talent and experience required to handle public relations and releases through the daily periodicals.

The loss of NEPSCO services in this area would be serious and extremely difficult to evaluate on a dollar basis but in my experience, good public relations are an absolute necessity for all utility companies.

[1419] Q. How would construction be handled for the severed gas companies? A. I believe that the gas companies should be able to obtain competent construction help from existing contractors in their areas except for certain specialists now on the payroll of the Construction Division of NEPSCO.

The gas companies would have to use available construction help from these contractors to perform the work of these specialists and depend upon close supervision of the work which, of course, puts an additional burden on their operating supervisors.

Q. What about sales and engineering activities? A. In regard to services in the sales and engineering fields, they are now provided to a great extent almost 100 percent by gas division. In the event of severance, the individual gas companies would lose the overall planning and coordination of these functions even though we have provided minimum staffs to perform the functions of sales and engineering.

Mr. Vorenberg: Mr. Examiner, we are at the end of

a section of Mr. Simes' testimony. We will be glad to go on a while longer or stop, whatever is the convenience of Mr. Nowlin.

Mr. Nowlin: It looked like you were running out. I thought maybe you were through.

Mr. Vorenberg: We have not run out yet.

With this witness we have another three-quarters of [1420] an hour or so. I assume you would not want to finish with him this evening.

Mr. Nowlin: Are you going to be able to finish tomorrow?

Mr. Vorenberg: I think we can, barring anything unforeseen. I think we could comfortable finish tomorrow if we break now.

Hearing Examiner Ewell: Do you have another witness?

Mr. Vorenberg: After him?

Hearing Examiner Ewell: After this witness.

Mr. Vorenberg: We have, let's see—we have—no.

Mr. Quarles: There are several witnesses.

Mr. Vorenberg: But no new ones. I think there will be no few faces after him. But, as Mr. Quarles indicated earlier, we will call back to the stand certain witnesses.

Hearing Examiner Ewell: Do you think you will take up most of tomorrow?

Mr. Vorenberg: I think we will take up most of tomorrow.

Hearing Examiner Ewell: But you expect to finish tomorrow?

Mr. Vorenberg: I certainly do.

Hearing Examiner Ewell: Because I have to be in New York on Wednesday morning for a hearing.

[1421] Mr. Vorenberg: I think we can finish tomorrow barring anything unexpected.

Hearing Examiner Ewell: Off the record.

(Discussion off the record.)

By Mr. Vorenberg:

Q. Mr. Simes, in your description of the Executive and Administrative staffing of each of these gas companies as set forth in the pro forma organization and in your description of the effect on these companies of the loss of services of the Gas Division and NEPSCO, you have indicated in each case what the effect would be of losing the services and how you have assumed they would be performed on an individual company basis. What is the overall dollar effect of severance of the Gas Companies at the Executive and Administrative level? A. The increased cost chargeable to operating accounts due to severance of the gas companies in the Executive and Administrative group is \$289,000 plus \$79,800 for outside professional services over the 1958 cost of local management, gas division services, Service Company services and outside professional services.

Q. Did you consider the possibility that services which you have assumed would be performed by personnel of the individual gas companies could be more economically performed by an outside organization? [1422] A. Very definitely, yes. As other witnesses have stated previously our assignment in this study was to project the most economical method of operation of these gas companies.

The Executive and Administrative staffs which we have established in the pro forma organizations of these companies are minimums and consistent with the size and earnings potential of each company.

All of the companies have at least four officers—a President, Vice President, Treasurer and Assistant Treasurer who is also the Corporation Clerk. This is a minimum any operating utility of any size should have. Only in Mystic Valley have we added one additional Vice President for Sales and Marketing because of the size of the company

and the scope of its operations. Also in Mystic Valley we have included a Director of Engineering, Director of Personnel, a Purchasing Agent and Auditor which again is consistent with the size of this company. In the medium size companies,—Lynn, North Shore and Lawrence—we have included a Sales Manager which is an obvious requirement for companies of this size.

The personnel which I have just mentioned and the functions which they would perform could not be farmed out to outside organizations or individuals. Functions and services previously performed by the Service Company and Gas Division personnel would have to be absorbed by these executives as time and capability permit or would have to be [1423] given up, except as their companies might obtain such services from outside firms on an occasional basis. No allowance has been made for such occasional services in our pro forma figures.

Of course, auditing and legal services would also be a necessity but they would be more economically obtained from outside professional organizations or individuals. Therefore we have provided for such outside professional services in our pro forma organization.

I, myself, have gone over these projections time and time again as though I had the responsibility of setting up these independent companies. On the basis of these reviews I am satisfied that the judgments are those which I would make if I had this responsibility to carry out.

Q. You have indicated that there are other effects resulting from loss of Service Company and Gas Division services than the direct dollar effect which is shown in the Ebaseo Report. Would you please summarize for us what these losses would be? A. We have not included in our estimated dollar loss of economies the effect of the loss of specialized services such as bulk purchasing, the Medical Department, coordinated safety programs, improvement

of methods and procedures. Our goal in this study was to project the most economical method of operation for these gas companies which would provide [1424] service on a level generally comparable with that now provided by the eight gas companies. It is obvious to us that there would be numerous instances where the organizations we have projected would, because of lack of specialization and depth, simply not be as good as the present organization.

I cannot emphasize too strongly that in the highly competitive energy market that exists today in this area it is of utmost importance to operate at maximum efficiency. Maximum efficiency is not accomplished haphazardly—it must be planned—and the plans must be effectively executed. This cannot be done without talent, skill and experience. The Service Company and the Gas Division have these qualifications and this is what the separated companies would lose. In my opinion this loss would be serious.

Q. So the record will be clear, Mr. Simes, I assume that the one ground rule you used in the projections you have just been speaking of was that each gas company would operate on an independent basis. I ask that question because, as I have indicated, I propose to ask you at a later point in this proceeding the extent to which changing this ground rule and putting the eight companies together would lead to further economies. A. Yes, it is true that in exploring and determining the best operating arrangements for these companies as set forth in the testimony I have given and in the Respondent's [1425] offered Exhibit 58, the assumption was that each of these gas companies would be on its own. If they operated as a combination, certain economies otherwise lost in severance could be saved.

Mr. Vorenberg: Since we will come to that at a later stage in this proceeding, I will not ask you to elaborate on that now.

Hearing Examiner Ewell: Off the record.

(Discussion off the record.)

Hearing Examiner Ewell: On the record.

It is now quarter after five and there is one little matter that I would like to inquire about before we adjourn tonight and that is the question of how much time the staff is going to request by way of adjournment to prepare for cross-examination.

Do you have any thoughts on that subject at this time?

Mr. Nowlin: No, sir.

My present thought would be that we would ask the hearing be adjourned subject to your call. Otherwise when we try to fix a definite date and it turns out we cannot meet it or somebody may be sick on that date or could not attend, and I think it would be more definite for—

Hearing Examiner Ewell: The reason I asked that question, as you are undoubtedly aware there is a policy in [1426] the Commission that any adjournment in excess of 30 days should be submitted to the Commission for their approval. So I thought if you were going to request a specific time in excess of that, I would like to be prepared for it so that I can take some action in regard to that tomorrow before the direct case on behalf of the respondent here has been concluded.

Mr. Nowlin: I certainly do not think the staff would be in a position to go forward in less than 30 days. I say in order to eliminate a similar situation we got into before trying to find a satisfactory date for all the parties that it would be better to continue it subject to call of the Examiner and then let the Examiner schedule a day definite.

Hearing Examiner Ewell: That seems reasonable.

How does that impress you, Mr. Quarles? Do you have any objection.

Mr. Quarles: No objection whatever, sir, subject only to our having reasonable advance notice or being consulted in advance of the fixing of that date so as to make sure it would not conflict with other engagements.

Hearing Examiner Ewell: I can assure you that if that is subject to my call you will have such reasonable notice.

Mr. Quarles: Thank you, sir.

Mr. Nowlin: I hope you understand, Mr. Examiner, the task that confronts the staff. None of this information is available to us prior to the day of the hearing.

[1427] Hearing Examiner Ewell: I am fully aware of it and when I take a look at this exhibit—

Mr. Nowlin: There is a tremendous amount of material here to go through and get prepared on.

Hearing Examiner Ewell: Yes.

Mr. Nowlin: We still do not know what is going in yet.

Hearing Examiner Ewell: Yes. I think Exhibit 58 alone is a persuasive argument in your favor.

Mr. Gishman: A weighty argument.

Mr. Quarles: We naturally want the case to move along in reasonably orderly fashion and reasonably promptly but we are not pressing. We are not against a dead line. So it will be entirely agreeable to us to leave it for the staff to make their check and get better ideas as to how long they will need and then consult with you and you fix the date for reconvening.

Hearing Examiner Ewell: Fine.

Off the record.

(Discussion off the record.)

Hearing Examiner Ewell: This seems to me like a good time to adjourn.

We will resume at 10 in the morning.

(Whereupon, at 5:20 p.m., the hearing recessed, to reconvene at 10:00 a.m., Tuesday, May 24, 1960.)

[1429]

PROCEEDINGS

Examiner Ewell: Let us resume, gentlemen.

Whereupon

JAMES SIMES

resumed the stand and, having been previously duly sworn, was examined and testified further as follows:

Direct Examination (Resumed)

By Mr. Vorenberg:

Q. Mr. Simes, you stated earlier that your assignment also included investigation of the effect of severance on situations where property is jointly occupied. Would you explain this assignment in more detail? A. In the NEES System there are properties which are owned or leased by one operating company which in turn provides space for one or more affiliated NEES companies. Charges are made for the use of such space.

Q. What is the basis of these charges? A. In the case of property that is owned by one of the companies the rental amount is based on the following factors: labor such as janitors, watchmen, maintenance; payroll, taxes and insurance; janitorial supplies and expenses; water and sewer costs; depreciation; insurance; municipal taxes; heat and light and return on investment at six per cent.

These costs are then allocated to the renting [1430] company on the basis of square feet of space occupied.

In the case of leased property a part of which the leasing company then sublets to another company a share of the rent is charged based on use of the space plus a share of charges for maintenance, heat, light and power.

Q. What areas of the NEES System are involved in this? A. In general there are six areas involved in these inter-company billings. The Malden area where there are properties jointly used by Suburban Electric and Mystic Valley Gas; the North Shore area including Salem, Beverly and

Gloucester where there are properties jointly used by Merrimack-Essex Electric and North Shore Gas Company; the Lynn area with properties jointly used by Lynn Electric and Lynn Gas; Lawrence area where Merrimack-Electric and Lawrence Gas jointly use various properties; the Worcester area where there are properties jointly used by the Worcester County Electric Company and the Wachusett Gas Company in Leominster and Clinton and by Worcester County Electric and Central Massachusetts Gas Company in Spencer, Webster and Southbridge; and finally the Northampton area where Northampton Gas and Northampton Electric jointly use certain properties.

We made an inspection of all properties which are jointly used by electric and gas companies in the areas [1431] that I mentioned.

Q. Mr. Simes, just what did you examine in your inspection of these properties? A. We were looking for several things. The relative amount of floor space used; the purposes for which it was used; the adaptability of the premises for division and use by non-affiliated companies, and in general the physical condition and characteristics of each building.

In addition we surveyed each of the towns in order to gain a general impression of the level of prosperity of the town, to see what types of buildings existed in the towns and the general availability of rental space.

We also considered all of the space in the area which was used by NEES companies to enable us to consider various alternatives in the event of severance.

Furthermore, we discussed prevailing rates for rental properties with members of the Chambers of Commerce in each of the areas in regard to three types of property; store space, office space and storeroom space.

Q. Why did you choose to discuss rental rates with the Chambers of Commerce rather than with local realtors?

A. In our experience with realtors, rates tend to be higher when a realtor learns that a utility company is interested in land or office space. We know that the Chambers of Commerce usually maintain average rental figures [1432] for the areas they serve and they make them available to anyone making inquiries.

Q. What were the results of your discussions with the local Chambers of Commerce? A. From each local Chamber in the six areas under consideration we received rental rates for three types of space—store, office building and storeroom space—in terms of dollars per square foot per year.

In order to obtain a weighted average, the rates in each category of space were multiplied by the required amount of space in the respective categories in each area. In this manner an over-all weighted average of \$2.02 per square foot per year for all types of space was derived. The figure used in our report for this type of space is \$2 per square foot.

Q. Was your discussion with Chambers of Commerce the sole test of the reasonableness of the \$2 figure? A. No. We considered present rents paid by NEES companies and discussed the matter with NEES personnel familiar with the rental situations.

Q. I note that the Ebasco Report also uses a figure for the estimated cost of maintenance, light, heating, water, etcetera. A. Yes, we used a figure of 75 cents per square foot to cover these items.

[1433] Q. How was this figure of 75 cents per square foot derived? A. Primarily this figure was based on the judgment of Ebaseo and NEES experts in the field of space planning. However, we decided to test the figure in the Malden area which was one of the principal locations involved in inter-company billings. The basis of the test was a study of building expenses other than rent and janitorial

service which were paid by the electric and gas companies jointly using five buildings in the Malden area—in Everett, Medford, Melrose, Revere, and Winthrop.

These charges other than rent included heating, electricity, minor maintenance, window cleaning and floor waxing, janitorial supplies, water, and miscellaneous items such as snow shoveling and grass cutting. The annual cost for these items divided by the total floor space occupied resulted in a unit cost of 77 cents per square foot per year. As a result of this investigation we were convinced that the 75 cents was a satisfactory figure to cover these items of expense.

Q. Why did you take a flat \$2.75 figure instead of making your projection on a location by location basis? A. Space costs depend so much on the particular facts at the time space is obtained that it would have been quite arbitrary to make such individual projections. In [1434] our judgment figure which we are satisfied is fair and conservative on System average basis presents a more realistic projection.

Q. Once a satisfactory rental rate had been established, what was the next step? A. In each of the areas where property was used jointly by electric and gas companies, decisions had to be made as to what the vacating company would do and what the remaining company would do.

In the case of the vacating companies, it was assumed that they would move into other properties which they owned if these properties were suitably located and could be suitably adapted to the needs of the company.

If there were no owned properties that met these specifications, it was assumed that the vacating companies would have to rent suitably space in desirable locations. Where such space had to be rented we used our average rental figure of \$2.75 per square foot per year.

For the purposes of this study we assumed that there

would be no capital expenditures for the construction of new office building, storeroom, and store space.

Q. What about the companies which owned or had a lease on the space and would not have to move? A. In those cases we examined the possibility of subletting the vacated space, the possibility of bringing [1435] in other operations of the same company to utilize the vacated space and, third, the economics of relinquishing that space and renting smaller quarters.

Q. Mr. Simes, for purposes of clarification of what you have just described could you give a specific example of how such decisions were arrived at? A. Yes. Take the case of the office building in Salem which is jointly occupied by the Merrimack-Essex Electric Company and the North Shore Gas Company. This building was leased by Merrimack-Essex who in turn sublet space to the North Shore Gas Company for store and general office use and store space to a non-affiliated tenant.

North Shore paid to Merrimack-Essex its share of the rent and building services on the basis of the area occupied by North Shore. In the event of severance, it was assumed that North Shore would move since Merrimack-Essex held the lease on the building.

We had to determine how much space North Shore would require and where the activities could be most suitably housed.

We explored two possibilities: first, renting office space in Salem, and, second, moving the North Shore general office activities to the building which North Shore owns in the neighboring town of Beverly.

North Shore rented office space on the second floor [1436] of its Beverly building to outside tenants. The space requirements of North Shore at Beverly would necessitate asking those tenants to move with the consequent loss of rent revenue.

The economies of the situation dictated that we assume that the North Shore would pursue the latter course and move its general office activities into its Beverly building and rent a small store in Salem to continue its merchandising and collection activities in that town.

Now, in the case of Merrimack-Essex, the question became, should Merrimack-Essex stay at its present location and attempt to rent the space vacated by North Shore or should it rent smaller quarters in Salem.

An examination of the area and the location of the building now occupied by Merrimack-Essex led us to the conclusion that the first floor space vacated by North Shore could probably be rented but that the second floor office space would be very difficult if not impossible to rent.

The income estimated to be received from possible rental of first floor space was not sufficient to offset the economies of moving to smaller quarters elsewhere in Salem. Therefore, it was assumed that Merrimack-Essex would move to smaller quarters. These decisions were the basis for the changes in the intercompany billings for [1437] jointly used properties shown in the pro forma statements in the Ebasco Report.

Q. Was the effect of severance on intercompany billings in each of the other areas as complicated as the example you just gave? A. No, but our process of analysis was the same. In the case of Northampton, for example, there is a building in good structural condition owned by the Northampton Gas Company but oddly constructed on the side of a hill. The first floor is at street level on the top of the hill but the second and third floors are below street level. We gave consideration to the possibility of renting the vacated space on the first floor.

Because of entrance problems, it was decided that only a portion of vacated space on the first floor was rentable and because of the location we assumed that it could be

rented. As a consequence we reduced the projected loss of economy due to the electric company's moving by the estimated amount of annual rental received from an outside tenant.

An example in the opposite direction would be the office building in Southbridge which is a sixty year old, four-story wood building which had been previously a private residence and is now owned by the Worcester County Electric Company. In the event of severance, it would be impossible for Worcester County Electric Company to rent the space vacated by Central Massachusetts [1438] Gas Company not only because of the type of building but because it is not in the business center of town. As a result, we decided that there would be no rental income to offset the loss brought about by severance of the gas company.

Q. Mr. Simes, did you have any general areas of responsibility in the Ebaseo report other than the specific assignments which you have discussed? A. Yes, I did.

Q. Would you tell us what these areas were? A. Certainly. You will notice in the Ebaseo Report that there are discussions of the effect of severance on Production, Distribution, Utilization and Garage activities of the gas companies and Distribution functions of the electric companies under Part B, Section II of each individual company; on Transportation costs of each individual company under Part G, Section II and on Miscellaneous items of cost under Part H, Section II of the electric companies and Part I, Section II of the gas companies.

In addition there is a Part H of Section II of each gas company which discusses increased professional services which the individual gas companies must engage in the event of severance.

Q. Would you describe in general the nature of the [1439] items that were considered in the Production, Dis-

tribution and Utilization and Garage activities? A. The items that had to be considered in these categories varied for each company. Since Mystic Valley is the largest of the gas companies and consequently had more items to be resolved in this group, I will use it as an illustrative example.

A company the size of Mystic Valley will require a Utilization Engineer to direct the Service School and train servicemen. In 1958 a Utilization Engineer was on the payroll of the Gas Division and his salary has been apportioned among the seven gas companies in proportion to their participation in the Service School. Mystic Valley is the only company large enough to afford personnel of his type.

In the area of customer service there were certain functions which were performed and certain records which were housed jointly for Suburban Electric and Mystic Valley Gas. A new organization of these functions on a segregated basis had to be established.

In Malden the Suburban Electric Company owned and operated a Garage where it serviced and made minor repairs to Mystic Valley transportation equipment. With segregated operations, provision had to be made to enable Mystic Valley to perform these functions on its own.

[1440] Q. Would you also give a general description of the items that were considered under Transportation? A. Again using Mystic Valley as an example, there were certain vehicles which were used in combination operations by Suburban Electric and Mystic Valley Gas Company. In the event of severance the joint use of vehicles would be discontinued resulting in both Suburban Electric and Mystic Valley having to augment their transportation fleets.

Q. Would you describe briefly the items that were considered under the category of Professional Services? A. In our consideration of the requirements of the individual gas

companies for outside professional services, it was decided to include only those services which would be an absolute necessity—outside auditors and legal counsel. Our predictions are based on conservative estimates from legal sources as to the minimum amount of legal services that would be required by each gas company in the event of severance and an estimate of the fees for such services. This same procedure was followed in estimating the additional cost to the gas companies for professional accountants' services.

Q. Mr. Simes, would you describe briefly if possible the type of the items that are included under Miscellaneous?

A. These Miscellaneous costs to which I have referred [1441] vary as to nature, number and amount from company to company. Briefly I will enumerate a few of the types of items: telephone switchboard service that was jointly used; charges for the Service School which I mentioned previously; rental of machine accounting equipment which was used jointly; registrar and transfer fees which would be required if the stock of independent gas companies were publicly owned; annual depreciation of new office furniture and equipment which the independent gas companies would have to purchase. In general, I think these portions of each section of the report are self-explanatory.

Q. What is your general conclusion on the question of severance on the independent company basis? A. Speaking as an operating man, I can only say that to deprive the gas companies of the economies and other benefits I have described would be a shocking thing unless some vitally important purpose were served. The dollars are only part of the losses which these companies would suffer. I certainly see no purpose or advantage that would be served by breaking off the gas companies.

Q. I would now like to turn with you to the supplemental record which has been marked and offered as Respondent's Exhibit 91. You have heard Mr. Quig's testimony with

respect to the so-called supplemental report? A. Yes, I have.

[1442] Q. Was Mr. Quig's description of the area of your responsibility for your role in the preparation of this Supplemental Report an accurate one? A. Yes, it was. As I indicated earlier in my testimony, I made a detailed study and analysis of the executive staff and administrative arrangements, both actual and pro forma as shown in the Ebasco Report. The study, analysis and gathering of additional data that was necessary in connection with our work on the Supplemental Report was a logical extension of this.

Q. Will you tell us, generally, the basis upon which you projected the new central organization for these combined companies? A. In this case we considered the size of the companies, the nature of their business and the extent to which it would be economically and administratively sound to operate on a centralized basis.

In making this projection it was, as Mr. Quig has indicated, very helpful to have as a point of reference the present Gas Division. However, as an analysis of the Supplemental Report reveals, there are a number of fundamental variations from the organization of that division which would be made if these eight gas companies were operating on a combined basis but without the benefit of the rest of the NEES organization.

[1443] Q. What additions or changes did you make from the present Gas Division organization in designing to provide a central organization for independent operation? A. Pages 3, 5, and 6 of the Supplemental Report describe the proposed central organization for a consolidated gas system. On page 4 is a pro forma organization chart for such a central organization showing the President and his immediate subordinates — an Executive Vice President, General Counsel and Treasurer.

The chart also shows the executive and staff groups reporting to the Executive Vice President and his Treasurer.

The organization below the level of the executive vice president performs all the present Gas Division functions and has some added personnel and functions. The Vice President (Marketing and Supply), Vice President (Management), and Vice President (Operations and Engineering) correspond generally to present executives in the Gas Division although in addition to their present duties each of them will have to assume duties now performed elsewhere.

The Sales Manager takes the place of the present Sales Promotion Manager. The Public and Personnel Relations, Purchasing and Safety Departments are additions required for efficient central operation.

Q. Why do you have both a President and an Executive [1444] Vice President? A. At the present time, the President of the gas companies can devote most of his time to the operation of these companies without being too concerned with financing, treasury, accounting, public relations above the local company level, labor relations, legal, insurance and similar matters.

Upon separation from NEES the President would have to devote much of his time to matters now handled by NEES executives, and, accordingly, would certainly require an able and experienced second in command to assume not only many of his present duties but many added ones.

Q. Why have you included a Sales Manager instead of a Sales Promotion Manager? A. Sales are one of the most important areas to concentrate on if these companies are to survive and continue to grow. The President of the gas companies now devotes a great deal of his time to the companies' sales program.

Here again, upon separation, it would be essential to pass over some of the President's functions to an individual who would completely assume not only the domestic

promotional program for the development of sales but the full responsibility for the supervision and operation of all sales activities including not only domestic but [1445] builder, dealer, commercial and industrial sales.

Q. Why have you placed the Sales Manager under the Vice President for Marketing and Supply? A. Because in an organization of this size responsibility for all gas sales should be located in one branch of the organization. In the present Gas Division organization, the Vice President for Marketing and Supply has responsibility for industrial and commercial sales while the Sales Promotion Manager acting directly under the President is concerned with advertising and merchandising directed primarily at the domestic market.

Since under independent operation, a good deal of the President's activities with respect to promotion of domestic sales would have to be passed to his subordinates, it seemed logical to center the whole responsibility in the Vice President for Marketing and Supply and have a Sales Manager who would assist him not only with respect to promotion and domestic sales but also with respect to industrial and commercial sales.

Q. Why have you included a Safety Director in this pro forma central organization? A. These gas companies have a very fine safety record and I am positive that one reason for this record and the improvement in safety performance over the years has been the safety program conducted by the service company for the [1446] whole NEES System.

While it is possible to eliminate the Safety Department in the pro forma organization, I know it would result in loss of economies in the long run. An organization the size of the eight gas companies operating together could not afford a program as extensive as the present NEES System program, but in my judgment a full-time Safety Director would be justified. The Safety Director would

initiate specific safety campaigns, make inspection of System properties and practices, and coordinate the activities of local safety committees, and local management.

Q. Please describe the function of the public and personnel relations group in the pro forma central organization. A. This group would have general responsibility for all phases of personnel relations. This responsibility encompasses keeping of personnel records, directing of employee training, conduct of union negotiations and supervision of grievance procedures and the whole area of employee assistance. Obviously the gas companies would not be able to provide the type of medical assistance now provided by NEPSCO but the administration of a limited program would be the responsibility of this group.

Furthermore, while the gas companies could not afford an employee magazine such as the NEES System's [1447] "Contact", even a reduced house organ would be desirable and this group would be responsible for its preparation.

On the public relations side, this group would have the general responsibility for preparing new releases and maintaining good relations with various elements of the public.

Q. What will the purchasing group do? A. The purchasing group will be responsible for purchasing all material and supplies for the eight gas companies and the central organization. There is no question that centralized purchasing results in obvious economies which was the reason for establishing a Purchasing Department in the Central Organization. On the basis of my experience, our estimate of the five employees in this pro forma organization is conservative.

Q. And now moving out from under the Executive Vice President, please explain why you have included a General Counsel. A. The question of outside counsel versus inside counsel is always a difficult one. In the pro forma organizations for independent operation of the eight companies,

we felt that none of the companies was big enough to justify a full-time General Counsel and the eight companies would have had to rely entirely on outside law firms for legal services. In a system of this size, while the volume of work [1448] would not be enough to justify a full-scale Legal Department, with experts on the many specialized phases of public utility law, we think a single General Counsel would be justified.

An inside counsel has the advantage that he develops a thorough familiarity with the System's problems and he facilitates coordination with outside counsel when they are required. We estimate that a General Counsel would take care of all the day-to-day legal problems of the whole System and would handle about half of the out-of-the-ordinary work which comes along.

Q. Turn now to the Treasurer and the organization under him. Did you build this organization around any existing group? A. No. Gas company treasury activities are now directed by the NEES System Treasurer. Upon separation, if the gas companies are to be operated on a combined basis, a whole new treasury organization would have to be built.

Q. Please explain briefly the functions represented by each of the blocks under the Treasurer. A. The systems and controls group is the Comptroller and his staff of three accountants and a secretary. This group would be responsible for internal auditing and for development and improvement of systems and methods. It is a small group which would carry on a very important and [1449] potentially very productive activity.

The Assistant Treasurer would have direct line responsibility for and supervision of the accounting groups in the eight local companies. The Treasurer and Assistant Treasurer would be the Treasurer and Assistant Treasurer respectively of the eight companies.

The Treasury staff would handle all matters which can most efficiently be handled at headquarters such as federal and state tax matters, regulatory commission reports, insurance matters, rate studies, indenture requirements, statistical and accounting analyses, consolidated reports, management reports, information to security holders, security issues and borrowings. They would conduct special studies in connection with FPC filings, rate hearings and other such matters.

Q. Are all of the functions which are now performed by NEPSCO for the gas companies transferred to this pro forma central organization? A. By no means. The severed gas companies could not afford to provide all of the services which NEPSCO makes available to affiliates of the NEES system. There is always a question for any company of just what funetions it should perform for itself, what services it should hire from outside and what functions, services or activities it must simply do without. [1450] The answer to this question depends on many factors, but it is largely dependent upon the size of the company and its financial status. An organization the size of NEES System can economically support specialists to provide services which a smaller system would either have to do without or hire from outside. An organization such as a combination of the eight gas companies would come somewhere in between a small independent company and the NEES System in this respect.

Furthermore, as between a system of the size of NEES and one the size of this gas system, there must be some combination of functions in the smaller system which could be handled by separate specialists in a system the size of NEES.

For example, the Gas Division presently calls upon NEPSCO for the assistance of experts in its rate department to evaluate the rate structures of the several com-

panies. In our pro forma organization we have assumed that this function would have to be absorbed by the Vice President for Marketing and Supply although we have not provided him with any staff of specialists to assist him in this work. This, of course, would leave him somewhat less free to concentrate on other matters for which he would continue to be responsible.

Q. Mr. Simes, please describe the organization of [1451] the local Executive and Administrative Staff to operate the eight gas companies under combined operation. A. In general, we determined that the local organizations as they existed at January 1, 1959 with minor modifications would form a sound basis for the local organizations in the Supplemental Report.

This decision was based on the fact that the duties and responsibilities of the personnel below the level of the central organization would remain substantially the same as those which existed under the NEES management as of January 1, 1959. The activities of production, distribution, utilization, sales and accounting would be performed and supervised much the same as they were then.

Q. What are the modifications you refer to? A. The best way to explain these modifications would be to take each position as it appears in the executive and administrative group and explain the variations.

There were positions of vice-president and manager in each of the local companies except Lynn which was a combination gas and electric company at that time. Since the duties and salaries were dependent to some extent on the individuals in those positions we ignored existing personnel and salaries at that level and reappraised the requirements for top management in each local area.

We then set up a vice president and manager in each [1452] area and established salaries commensurate with the responsibilities of each.

Q. Have you made any modification in the position of General Superintendent? A. In the pro forma—local organization we have included the position of General Superintendent in the executive and administrative personnel of all gas companies. This position existed in all of the gas companies on January 1, 1959 with the exception of Mystic Valley and North Shore Gas Company.

At that time Mystic Valley and North Shore had positions with the title of Assistant Manager whose duties were somewhat different from those which we visualized for General Superintendent. We changed the title to General Superintendent because as we see it his responsibilities under this pro forma organization should be exclusively in the operating areas and his duties would be the supervision of the Superintendents of the Production, Distribution, and Utilization Departments.

Q. You have shown the positions of Chief Accountant, Assistant Chief Accountant and Chief Clerk in the pro forma executive and administrative personnel of the local organizations. Are these positions different from what existed on January 1, 1959? A. Yes. Since the NEES District Treasury organizations [1453] could not be duplicated, we established six local accounting supervisory positions to which we gave the title of Chief Accountant.

In our pro forma organization North Shore Gas Company and Lawrence Gas Company would share a Chief Accountant and Wachusett Gas Company and Central Massachusetts Gas Company would share a Chief Accountant. This was done because certain accounting activities of North Shore and Lawrence would be centralized. The same is true of Wachusett and Central Massachusetts.

In Mystic Valley Gas Company we established the position of Assistant Chief Accountant to assist the Chief Accountant because of the size of the Company.

Because of the combined responsibilities of the Chief

Accountant of North Shore and Lawrence, we established the position of Assistant Chief Accountant for these two companies. In the case of the combined responsibilities of the Chief Accountant for Wachusett and Central Massachusetts, we provided a Chief Clerk to assist him. We used the title of Assistant Chief Accountant in one case and Chief Clerk in the other because of the relative difference in size of the two groupings and consequent greater responsibilities.

Q. Are there any other variations in the executive and administrative group among the eight gas companies?

A. Yes. In the North Shore Gas Company we have continued the position of Local Manager in Gloucester. We believe that the character of the town together with the distance of the Gloucester division from the general office require a local representative with the title of Manager [1454] primarily to handle public relations.

In the local organization executive and administrative group in Lynn we have included an Administrative Assistant who would report to and assist the Vice President and Manager. This position was deemed necessary because of the size of the company and the greater number and variety of management problems.

Of course, we have included the necessary secretarial and clerical staff to assist the executive and administrative personnel.

Q. How were the salaries established that are shown for the executive and administrative personnel of the Central Organization? A. We used the same basic approach which I have described in talking about the Ebasco Report. We considered the duties and responsibilities of each executive in the Central Organization in relation to the size and complexity of the system. Then, whenever possible we compared the salaries which were established with salaries for comparable positions in other Massachusetts companies.

For example, the office of President of a system this size would require a man of extensive experience in all phases of gas company operation. We knew that presidents of comparable companies received salaries around \$50,000. To obtain one of them, the salary would have to be higher. [1455] We decided it would be sound to seek a man who had broad experience at a lower level in a comparable company or presidential experience in a smaller company. In either case, the offer would have to be equal to or higher than those salary levels. With these considerations in mind, we established a salary of \$40,000 for the office of President.

Similar considerations went into the salaries of the Executive Vice President, Treasurer, Assistant Treasurer, General Counsel, Sales Manager, Public and Personnel Relations Director, Purchasing Agent, Safety Director, Comptroller and Treasury Supervisor. Below the level of President it was also necessary to weigh one position against the other to establish comparable levels of compensation within the organization based on the relative importance of the various responsibilities.

Q. In the list of executives you just mentioned, didn't you omit the three Vice Presidents? A. Yes, I did. As I mentioned before, the Central Organization of the eight gas companies would be built around the Gas Division. Since those three positions existed at January 1, 1959 we used the approximate salaries for those positions at that date.

In view of the fact that each of these positions would have added responsibilities when separate from the NEES System, this assumption is definitely conservative. The same method was used in establishing the salaries of the [1456] Engineering group.

Q. How were the salaries established that are shown for the executive and administrative personnel of the local

organizations? A. These salaries are based on considerations of the duties and responsibilities of each executive in each of the eight gas companies, the size of each company and the staffs which each executive had to supervise.

In the case of the position of Vice President and Manager salary considerations were also weighted by the fact that this man would be the chief representative of the entire system in his area.

Finally, in the case of superintendents and staff personnel in the local organizations the duties and responsibilities would be the same. Therefore, we used the salaries that were being paid on January 1, 1959.

Q. Did you pattern the pro forma production, distribution and utilization departments on present organizations or on the pro forma organizations for independent operation? A. There is very little difference between the pro forma operating departments for independent operation and the actual organization. The changes amount to the addition of only a few personnel. Under combined operation the function of the Utilization Engineer in the Mystic Valley [1457] pro forma organization as shown in the Ebaseo Report would be handled by the Central Organization. The pro forma local organizations for combined operations are patterned on the pro forma local organizations for independent operation with this exception.

Q. What changes did you make in the local organizations for New Business as compared with the independent pro forma organization? A. None, except in Lynn where we eliminated an Advertising Manager, Home Service Director, a Merchandise Manager and substituted a Sales Manager, Secretary and a Clerk. Generally, the organization requirements for New Business would be the same for combined operations or for independent operation or as they are for operation as part of the NEES System.

Q. I assume there are any number of ways in which functions might be allocated between the local and central organizations in a system of this sort, and also any number of different decisions which might be made as to what functions the system was to perform for itself through its own personnel and what it would hire outsiders to do.

To what extent have you given consideration to such alternatives? A. Wherever relevant we have considered alternative ways of performing the required work at every stage of the [1458] study reflected in the Supplemental Report just as we did in the case of our study of independent operation and have chosen what we believe to be the most economical method of performing each function.

Q. Mr. Simes, in general, what is your opinion as to the effectiveness of the organization projected in the Supplemental Report? A. If you have to take these eight gas companies and project how they might be combined on a sound and economical basis, it seems to me that the organization we have projected is a good, workable one.

However, it is important to bear in mind that the very real advantages to the gas companies of being part of the NEES System, and in particular, receiving the specialized services of the Service Company and the economies and depth of joint activities with electric companies would be lost.

In describing my feelings as an operating man about severing the gas companies from the System as per the principal Ebaseo Report, I said I thought it would be a shocking thing.

Again, speaking as an operating man, I feel very much the same way about separating gas from electric notwithstanding the combination which we have been talking about. [1459] Q. Thank you, Mr. Simes.

Mr. Vorenberg: I have no further questions at this time, Mr. Hearing Officer.

Hearing Examiner Ewell: Do you have any questions of the witness, Mr. Nowlin?

Mr. Nowlin: Not at this time.

Hearing Examiner Ewell: Subject to recall.

Mr. Nowlin, I wonder if this would be a good time to discuss the question of the adjournment to afford time for preparation of cross-examination?

Mr. Nowlin: I have conferred with my associates, Mr. Examiner, and they agreed with the suggestion I made yesterday that we adjourn subject to the call of the Examiner.

Hearing Examiner Ewell: How much notice would you want, Mr. Quarles?

Mr. Quarles: If it could be arranged that we could be notified before a notice went out, it would be helpful, on a matter of two or three weeks.

Hearing Examiner Ewell: I see no reason why that could not be done. Is that right, Mr. Nowlin?

Mr. Nowlin: You mean you want two or three weeks?

Mr. Quarles: Not if we can fix it in advance, no.

Mr. Nowlin: I see no problem there.

Hearing Examiner Ewell: If you agree on a date, any amount of notice sufficient in order to get the mailing [1460] out would be adequate, is that right?

Mr. Quarles: Yes, sir.

Mr. Nowlin: Mr. Examiner, perhaps I should supplement my previous suggestion as to provide that the hearing is adjourned subject to the call of the Examiner or upon further order of the Commission.

Hearing Examiner Ewell: Well, I think that I will inform the Secretary of what was agreed on.

Mr. Nowlin: Off the record a minute.

(Discussion off the record.)

Hearing Examiner Ewell: We will take a short recess at this point.

(Whereupon, a short recess was taken.)

[1461] Mr. Vorenberg: Before we call on the next witness, Mr. Hearing Examiner, you will recall that yesterday Mr. Nowlin requested that there be introduced as an exhibit one of Mr. Johnson's working papers. Since we only had one copy we have had photostats of that made. Respondent's Exhibit 90 was reserved for that purpose.

Hearing Examiner Ewell: Do you have it now?

Mr. Vorenberg: We have it now.

Hearing Examiner Ewell: All right, the record will show it is received.

(Respondent's Exhibit No. 90 was marked for identification and received in evidence.)

Mr. Vorenberg: I would like for the record to say one word about it. It is not described by Mr. Johnson. In the lefthand margin it lists two headings; "The New England Electric System, Massachusetts Gas Companies," and the other says "Other Non-Affiliated Massachusetts Gas Companies With Over 5,000 Meters." Obviously non-affiliated means non-affiliated with the NEES system. Some of them may have other affiliations.

Also all of the information included on this working paper other than the information under the words "Total Pro Forma" at the far right in the upper group of figures is taken from Massachusetts Department of Public [1462] Utility Reports. The information shown under the heading "Total Pro Forma" represents some of Mr. Johnson's working computations at some stage along in his study. I would emphasize again that this is simply a working paper.

We would next recall to the stand Mr. C. W. Pearson who has already been sworn and has already testified in this proceeding.

Hearing Examiner Ewell: All right.

